

# SIERRA CLUB BULLETIN

VOLUME XXIII

APRIL, 1938

NUMBER 2

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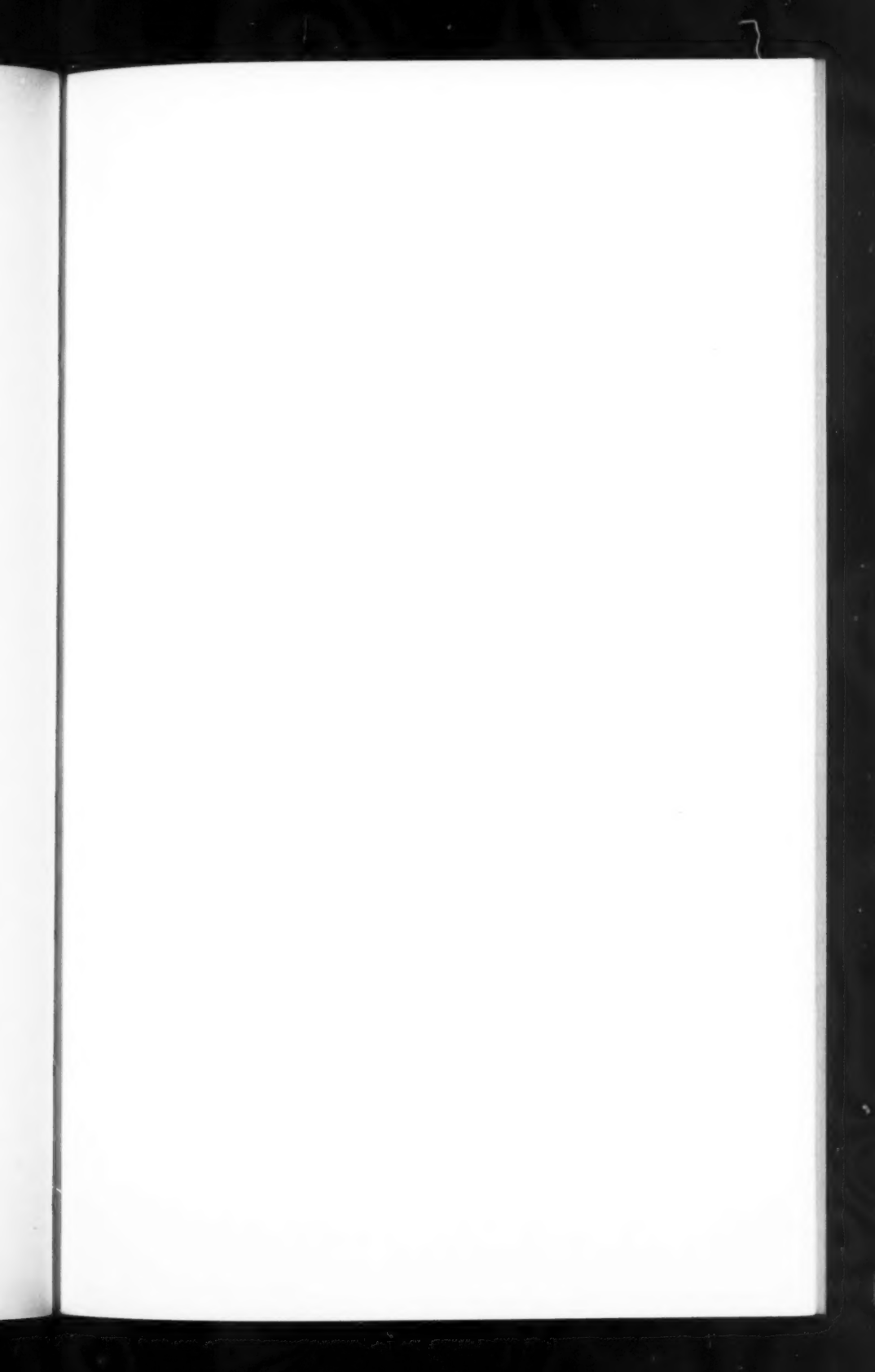
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# GLACIER ON MOUNT RITTER

FROM A DRAWING BY JOHN MUIR

*"A glacier which I had not before seen heaves in sight. It is on the north side of the highest of the many spires that run off from Ritter Peak as a center. It is one of the best I've seen in this wild region, occupying a most delicately curved basin and discharging into a lake."*

From John Muir's Journal as published in  
"John of the Mountains"

# SIERRA CLUB BULLETIN

VOLUME XXIII



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APRIL, 1938

## SOME EXCERPTS FROM JOHN MUIR'S DIARY

THE one hundredth anniversary of John Muir's birth, April 21, 1838, cannot pass unnoticed by the Sierra Club. Many of its older members still count their friendship with its first president among the most precious of their human relationships. For them, more particularly, the following brief paragraphs, drawn from an unpublished diary, have been chosen, in the belief that no tribute of ours could more vividly bring John Muir to mind than these fresh, unstudied words from his own pen.\*

### AT HOME ON THE RANCH, ALHAMBRA VALLEY, CONTRA COSTA COUNTY, CALIFORNIA

January 19, 1895—Rain, wind, black weather with tedious monotony, but it matters not as far as my fields are concerned. In writing scenery I am in Alaska and the mind goes there with marvellous vividness. I see the mountains and the glaciers flowing down their gorges and broad shell-shaped hollows.

January 20—Dark. The rainclouds in wondrous depth and fruitfulness. It seems marvellous that so much rain can be stored in the sky.

January 29—I caught a small screech owl this morning—a handsome horned fellow with gold eyes. He flew about my room and bumped his head against the window, and soon seemed to regret he had so easily allowed himself to be captured. Sitting on

\*From hitherto unpublished material, selections from which constitute the book "John of the Mountains," now in press. These excerpts are presented here through permission of Houghton Mifflin Company.

a doortop of an outhouse blinking dreamily, he quietly allowed me to take him in my hand.

January 31—The brightest balmiest day of all the happy new year, a true child of the sun . . . Scot pulling out Mission vines, Jim pruning, Joe plowing, larks singing. Snow still lingering on Diablo.

February 1—A balmy day. Sunshine and larksong in glorious measure. A petition is being circulated in favor of preserving larks from ruthless slaughter of gunners. Larks are as characteristic of California weather as sunbeams. As well shoot the sun out of the sky.

February 5—Still another golden day—all are alike now . . . Scot making fair headway on the vine snags . . . The Mission vine, the first planted in California, is a good table grape, but a poor wine grape and brings a low price for either table or wine. The padres ought to have known better—such good judges as they were in most things relating to the stomach.

February 12—Rain all forenoon with high wind . . . Streams rising . . . Robins flying about in large restless flocks. Am making slow headway with my literary task, the hardest of all work to me. It is so difficult to say things that involve thought at once clearly and attractively—to make the meaning stand out through the words like a fire on a hill so that all must see it without looking for it.

February 15—The Blue Herons have come . . . They are wonderfully regular in timing their year's affairs. Their clock does not seem to be affected by the weather.

March 24—Mt. Diablo one mass of purple in the morning. Nature is always lovely, invincible, glad, whatever is done and suffered by her creatures.

March 26—Thomas Ross was buried yesterday—a fine enthusiastic Scotchman, singer of songs, poetical, artistic, though only a plumber.

April 12—Another lovely day, mostly solid sunshine.

April 17—Here comes another bright day—the old pomp over again, seemingly monotonous through small local cares and tasks. While, like gophers, we drive our trade of soil-stirring, almost in the dark, how vast a multitude of interesting events are taking place over this busy loving hating world.

April 20—Lovely balmy morning. What a stir is in every living leaf, every cell a busy factory, and how enormously fertile are the kingdoms of insects. The air is all swirling and thrilling with singing wings—especially of the Ephemera. They rejoice and play in large assemblies and keep time in a wonderful way going round and round in giddy whirls and spirals, mostly from left to right with the sun into which they are geared in some mysterious way.

April 22—The flood of warm sunshine pours over California with increasing warmth and creaminess. The hill vegetation has mostly gone to seed and leaves are fading. A couple of Parkman's wrens are building a nest in the woodpile, merry singers and sprightly workers, bits of bright unclouded health.

June 14—Saw and talked with Thos. Magee, who told of a minister who did not believe in the age I gave of the Sequoias because a seedling in Scotland grew more rapidly than the giants of the Sierra for the first twenty years. This minister may know much of Heaven—he knows little of trees.

July 4—Passed the glorious Fourth at home, occupied as usual. The bunting and gunpowder have no charms for me, only something to escape from. The children burned a few firecrackers—made a show of patriotism with two small flags on the front step . . . The day has been strangely dark and cold with black clouds and light sprinkling rain, as if Nature frowned on the affair. The herons are all on the wing . . . The wrens are feeding a second brood of young in the old nest.

## JOHN MUIR IN YOSEMITE IN 1872

BY MERRILL MOORES

*[Ten years ago, my cousin Merrill Moores of Indianapolis, Indiana, sent me the story of his acquaintance with John Muir. If my cousin were living today, I am sure that he would be glad to give this account to the Sierra Club and the general public.—Samuel Merrill.]*

WHEN I was a boy of sixteen, Mr. Muir wrote my mother from the Yosemite Valley asking that I be sent west to spend the summer with him; and in May, 1872, I left Indianapolis by the recently completed railway for Galesburg and Omaha, and for the Pacific Coast over the Union and Central Pacific roads. At San Francisco, after a brief visit with cousins, I purchased a sturdy and serviceable mustang and a saddle and bridle and took the boat for Stockton.

Arriving in the morning, I mounted my bronco and started on my three-days' ride up through the foothills and mountains to my goal, Yosemite. I was alone and had very little money, and I learned almost at once that ferry- and bridge-tolls were always a dollar, and that the same price was exacted for horse-feed. I made up my mind at once to eat nothing on the journey; to feed my cayuse once a day, and felt sure of making it with the seven dollars I had. I had an army blanket strapped at the back of my saddle. The nights were pleasant, and with darkness I spread my blanket on the ground, using my saddle as a pillow, and slept until sunrise, while the bronco grazed. I was not hungry, as there was abundant delicious water to drink and I had a good strong belt which I tightened, morning and evening. On the evening of the third day, I arrived at Gentry's Hotel not far from the valley and stabled my horse and saw him fed and paid my last dollar, and walked over to the hostelry to be surprised to see on the balcony old friends, Mr. Richard Smith and his daughter Mollie, who invited me to dine with them. I was eating an apple I had picked up on the trail, about the first bit of sustenance I had had in three days. Eating with the attractive and interesting Mollie, who was

of my age, I hope no one will doubt my statement that I did full justice to that delicious dinner.

The next morning, at Tamarack Flat, which is 8000 feet above sea level, I bled rather freely from the nose, something which is by no means rare with people coming from lower levels; and a little beyond we descended about 4000 feet by a narrow and tortuous, as well as precipitous saddle-path, into the bed of the most beautiful valley in the world. From where the trail struck the bed of the valley, a level dirt road ran some three miles up the valley to Black's Hotel, where I met John Muir, looking as young and really handsomer than he had looked on our Wisconsin ramble, in 1867.

After a day at Black's, we went to the upper end of the valley and into camp not far from James Lamon's orchard. Our camp consisted of a dutch oven, a sack of potatoes, a pint cup of sour dough, which I used in the oven to make bread, a minute quantity of bacon, and our respective blankets. We had no cover of any sort and slept in the open from June until October. Muir was a poor cook, and I made all of our bread from sour dough in the dutch oven. Muir professed to like my bread; I must confess that I did not like it, and all that I can say in its favor is that it was better than the stuff he baked once or twice while I was away from the camp.

We also had near our camping place, if it is worthy to be called a camp, a corral in which horses were kept. A misguided admirer of John Muir, named Eaglesfield, who had a ranch in the San Joaquin Valley, near Merced, and bred fine horses, had sent Muir seven saddle-horses, which he kept in a corral near our *locus dormi*, in which he also kept the disreputable nag he owned and rode on his frequent trips through the mountains. Into this corral I turned my cayuse. Muir knew nothing about and cared even less for horses, regarding them as a necessary nuisance. His own horse, the only one he ever rode, had few merits, most of them negative. He was sure-footed; but he was intolerably lazy and distressingly slow; he could subsist on sedge grass and manzanita shrubs and go three or four days without feed; but he was good-natured and forgiving and never seemed to resent neglect. Furthermore, he would remain faithfully at the spot where Muir placed him, as Casabianca did, and required neither hobbling nor staking

out. Muir asked me to look after the Eaglesfield horses, which were superb animals. The care of them was really a great treat to me, and to put them in my charge was a real relief to John Muir.

Our nearest neighbor was a most interesting character, James Lamon, the first white settler in the valley. He was born in Virginia, in 1817, and at the time was fifty-five years old. He had visited the valley first about three years after it was discovered and was there during the summers of 1857 and 1858. He located there in the summer of 1859 and lived there the rest of his life, maintaining himself by as fine an orchard of varied fruits as I ever saw. His cabin was a mere shack, about ten by twelve feet. He was supposed to have constructed a small fortress up in a ravine which could only be approached by a narrow precipitous trail over which but one person at a time could pick his precarious way. Another most interesting character was another nature-lover, Galen Clark, who lived just back of the rim of the valley [at Wawona] and was one of the very best men I have ever met. Muir had many distinguished visitors in the valley, and that summer the one who made the greatest impression on me was Asa Gray, a Harvard professor and author of a standard work on botany. As I remember him, he was an unusually handsome man who, like Muir, wore a full beard and presented a most impressive appearance. He spent about a week in the valley and was with Muir all day long every day.

Muir wished to examine the glacier near the top of Mount Lyell, the tallest mountain in the vicinity of the Yosemite, the top of which had been pronounced inaccessible by the surveyors and other authorities. I accompanied him. Starting early in the morning on our horses, we made our way around Half Dome to Tenaya Creek and followed it up as far as Soda Springs, where the purest of cold water pours forth from the earth, heavily charged with carbonic-acid gas. At night, we tethered our horses with long lariats and built a fire to keep off the coyotes—keeping it up, of course, all night—and lay down to sleep, each in his army blanket and pillowed on his saddle. With the morning, we breakfasted on some of my villainous sour-dough bread, which was all that we had except oatmeal, which we boiled and ate, Scotch fashion, without sugar.

Mr. Muir agreed with me that, if I would assist him to run a

line of stakes across the glacier on a line drawn transversely across it at about the middle, he would go with me to see if the peak could be surmounted. We inspected the terminal moraine and both of the lateral moraines, as far up as half way. The glacier was then about a mile wide and very nearly as long. Muir sat on the lateral moraine on a huge boulder and gave directions as I crossed the glacier driving a stake in at every hundred yards.

In October we returned and found the rate of speed of the glacier at various points. As the straight line of stakes had become the arc of an enormous circle, we had absolute proof that it was a *living* glacier; and this was absolutely the first proof ever given that the canyons of the lower Sierra are of glacial origin. Muir had previously found other proofs, such as glacial mud at the terminal moraines; but this was the final and convincing proof; and Muir's contention as to their origin which he held alone for some years is now universally conceded.

After I had barely escaped falling into a crevasse, which I estimated to be from forty to sixty feet in depth, we started on to climb the peak. It was hard work, and at several places where the glacial ice was thinnest and rocks protruded, we found mountain daisies growing, and not far away from the apex and the glacier, we found the red snow of the Arctic. At last we reached the top, and saw the superb landscape extending for hundreds of miles around. To my infinite disgust, at the very topmost point, I found a huge cairn, obviously erected by human hands, and, removing the topmost boulder, I found a visiting card of J. M. Hutchings, with the written inscription: "*Nil Desperandum—Hutchings.*"<sup>1</sup> With Mr. Muir, I struggled back across that agonizing glacier, with a heavy heart and a broken spirit, to our camping place. The next day we started on our three-days' trip back.

Later in the summer, I accompanied John Muir and several others through the Hetch Hetchy and up the Tuolumne to the foot of Mount Lyell; but the story of that trip is too long to relate at this time.<sup>2</sup> I shall tell you only that for three days the party left me at a point impassable for the horses, to protect them, while they climbed. On the second day, being absolutely alone, as I

<sup>1</sup>Hutchings, who, with two others climbed the mountain September 8, 1871, was not, however, the first to make the ascent. John Boies Tileston, of Boston, had preceded him, August 29, 1871.—*Editor.*

<sup>2</sup>See S. C. B., 17:1, 1932, for a brief account.—*Editor.*

was for the whole time, I left camp for a stroll and went upstream a quarter of a mile, when I came face to face with a grizzly bear, who gazed at me bashfully and, turning in an embarrassed way, scuttled rapidly away in the underbrush. Feeling relieved, but not wishing to leave His Ursine Majesty between me and the horses, I executed an about face and walked about half a mile down-stream, when in a very narrow passage way, I met a very handsome skunk, and I promptly followed the example of my ursine friend and went back to the camp. When my party returned they found the horses intact and smelling as sweetly of a fragrant barnyard scent as they had smelled when the party left.

Later, Muir and I took two eminent artists, William Keith and a Mr. Ross [Irwin?] into the wilds of the Little Yosemite and spent a week while the artists transferred much of the exquisite and dainty beauty of that lovely reduced copy of the Yosemite to canvas. Still later, Mr. Muir, Professor Joseph Le Conte, and I went to the top of Clouds Rest. I rode all the way, up and back; but the older men walked the last half mile or so. It was late in October and I was about to leave the valley for Oregon, while Muir and Le Conte were starting east for Mono Lake. On the very apex of the magnificent mountain peak I left them, and Professor Le Conte said to me: "Well, Merrill, we have had a most delightful week together, and bidding you good-bye, I wish you a pleasant journey." John Muir held out his right hand, and said in his broad Scotch: "Weel, Merrill, ye may possibly become a great mon, and t'would nae mickle astonish me an ye do; but I assure ye, ye'll nae ever make an eminent naturalist and I wad ye'd so tell your mither."

[Merrill Moores never became an eminent naturalist; he did, however, become a prominent member of the bar of Indiana, and for ten years represented the Indianapolis district in Congress. He served on the National Parks Committee at his own request, that he might advance the conservation plans so dear to the heart of John Muir.—S. M.]

## JOHN MUIR AND THE GLACIAL THEORY OF YOSEMITE\*

BY FRANÇOIS E. MATTHES  
*United States Geological Survey*



JOHN MUIR'S name, it need hardly be said, will forever be associated with the Yosemite Valley which he loved so well. It will also be remembered—should be remembered—as the name of the humble nature lover who dared oppose the dictum of one of the foremost geologists of his time. The theory of that scientist, then widely accepted, was that the Yosemite had come into existence suddenly as the result of a violent convulsion of the earth, its bottom dropping out, so to speak, and leaving the sheer walls standing. Nothing but a catastrophic happening of this sort, it was believed, could have given the chasm its extraordinary shape. Yet Muir boldly advanced the unorthodox idea that the Yosemite had been gouged out primarily by a mighty glacier of the ice age, and that it had been elaborated little by little in the course of thousands of years.

In the controversy that ensued, Muir's theory was treated rather roughly by his opponents. Scientific controversies in those days were not conducted in the gentlemanly manner that now prevails. His views were assailed, ridiculed, and belittled as the wild fantasies of an ignorant shepherd. It seems appropriate, then, on this occasion to show where Muir's theory now stands, and to appraise its scientific worth as impartially and as dispassionately as may be, in the light of the findings of modern geologic research.

Mine was the privilege for several years, under the auspices of the United States Geological Survey, to study the complex problem of the Yosemite's mode of origin. Systematically and in detail I covered the very ground that Muir studied with so much zest. I did so, however, without the guidance of the charmingly intimate accounts of his discoveries which Muir wrote in letters to his friends, for those letters then were not yet published. My findings, therefore, were independently arrived at. Moreover, they were

\* Written for a broadcast, April 17, 1938. Published by permission of the Director of the United States Geological Survey.

tested out by comparative studies in all of the other Yosemite-like valleys of the Sierra Nevada.

The results may be summed up as follows: In neither the Yosemite nor in any other valley of its type is there evidence of any dislocation of the earth's crust. In every one of these valleys, on the other hand, there is abundant proof of powerful glacial action such as Muir had recognized. To be sure, the glaciers did not reach down to the foothills, nor did they excavate the canyons in their entirety, as Muir supposed. The ice age, it is now clear, was preceded in the Sierra Nevada by long periods of canyon cutting by the streams in consequence of successive uplifts of the range. But let no one cite these recently determined facts to Muir's discredit, for geologic science in the sixties and seventies of last century had not advanced to the point where any man, however expert, could have detected and proved them. Whatever shortcomings may be found today in Muir's geologic interpretations, they are to be attributed primarily to the limitations of the science of his day. To one thoroughly at home in the geologic problems of the Yosemite region it is now certain, upon reading Muir's letters and other writings, that he was more intimately familiar with the facts on the ground and was more nearly right in their interpretation, than any professional geologist of his time.

On this centennial of his birth, then, it will be a source of satisfaction to his friends and admirers to learn that, far from being in error, Muir was probably as nearly right in his glacial theory of the Yosemite as any scientist in the early seventies could have been.

## YOSEMITE AND THE SIERRA CLUB

BY WILLIAM E. COLBY

FEW of the present members of the Sierra Club know how much the Yosemite National Park means to the Club. Most of the Club's records and correspondence bearing on the subject were destroyed in the 1906 San Francisco fire. The other day I had occasion to relate the following facts to some one deeply interested in the park and was asked to reduce them to writing so that they might be preserved.

Through wise foresight the Yosemite Valley and the Mariposa Big Tree Grove were, June 30, 1864, granted by Act of Congress to the State of California, in trust, "to be held for public use, resort, and recreation." The State of California administered this trust with limited funds through the years that followed. In 1889 Robert Underwood Johnson, one of the editors of *The Century Magazine*, came to the Coast to secure material for publication, and met John Muir, who had been a contributor for many years to that magazine and its predecessor, *Scribner's Monthly*. Muir took Johnson into the Yosemite Valley, up to the Tuolumne Meadows, and down to the great falls and cataracts of the Tuolumne Canyon.<sup>1</sup> Johnson commented on the dearth of beautiful meadows and flora which Muir had described in his magazine articles.<sup>2</sup> Muir explained that this was due to the unlimited grazing by sheep or "hoofed locusts," as he called them. Johnson suggested the inclusion of the whole Yosemite region in a National Park and, around a campfire in the Tuolumne Meadows, it was agreed that Muir should write articles for *The Century Magazine* explaining the need for prompt action. In August and September of 1890 appeared two articles, "The Treasures of the Yosemite," and "Features of the Proposed Yosemite National Park." Johnson had a great many friends in Congress and was at that time urging the passage of a copyright bill for the protection of American authors. He fostered a bill for the establishment of the Yosemite National Park, which embraced an area suggested by John Muir,

<sup>1</sup> "Remembered Yesterdays." By Robert Underwood Johnson. Boston, 1923.

<sup>2</sup> See, "The Glacier Meadows of the Sierra," in *Scribner's Monthly*, February, 1879. This, with other magazine articles, were published in Muir's "The Mountains of California," by The Century Company in 1894.

and, appearing before the committees in Congress, almost single-handed, managed to secure its passage. It became a law October 1, 1890.

Muir's long sojourn in the Valley prior to his marriage, and frequent visits thereafter, made him familiar with its administration under State management. Evidently his straight-forward Scotch nature resented the way in which the Valley was run, for in a letter to Johnson dated March 4, 1890, he comments on the harmful politics involved in the administration of the Valley and suggests that a commission composed of the President of the University of California, the President of the State Board of Agriculture, and the President of the Mechanics Institute would be a desirable body to take charge of the Valley's affairs. He added: "Taking back the Valley on the part of the [Federal] Government would probably be a troublesome job."<sup>3</sup> This letter gives evidence that Muir had decided views on the subject and as early as 1890 had in mind the recession of the Valley to the United States. In fact he was so outspoken that the State commissioners at various times, smarting under the sting of his criticisms, attempted to backfire by charging that if Muir had not been stopped in his sawmill activities he would have cut down all the trees on the floor of the Valley. As a matter of fact, Muir never cut down a living tree in Yosemite Valley. When, in 1869-1870, he was hired by J. M. Hutchings to put together and run the sawmill which Hutchings had bought and transported to the Valley, and which no one else had the mechanical ability to do, he sawed up only fallen trees, from a swath of huge yellow pines on the north side of the Valley, near the foot of Yosemite Falls, which had been blown down in a violent windstorm a few years before.

In 1892 the Sierra Club was formed, largely as the result of the spirit and enthusiasm created by these *Century Magazine* articles of John Muir, followed by the establishment of the Yosemite National Park. John Muir gladly joined in the formation of the Club because he realized that an organization of this sort was necessary to defend the newly created National Park. He became its first president, which office he held until his death. One of the first things the Club did was to help defeat the

<sup>3</sup> Badè: "Life and Letters of John Muir," vol. 2, p. 238.

"Caminetti bill," designed to cut out large areas of the park in the interests of sheep and cattle men. On repeated occasions since then the Club has been called on to repel similar assaults on the integrity of the park.

Through the years John Muir never forgot the fact that the Yosemite Valley should logically be turned back to the Federal Government and become a part of the surrounding National Park. His opportunity came in 1903. He was planning a trip around the world with Professor C. S. Sargent, Director of the Arnold Arboretum at Jamaica Plain, Massachusetts. President Theodore Roosevelt was planning a trip to the Pacific Coast and had expressed a desire to visit Yosemite Valley. Friends who also knew John Muir had advised him that there was no one better qualified than the latter to tell him about the Valley, so an invitation to accompany the President was sent to Muir. Muir had already engaged his passage for his world trip and was disinclined to give it up, even for the President, but his friends persuaded him that he might accomplish a great deal of good for the parks if he went with Roosevelt, so he finally decided to change his plans and accept the invitation. Accordingly, he went by stage as far as the Mariposa Big Trees with President Roosevelt, Governor George C. Pardee, President Benjamin Ide Wheeler, of the University of California, and other noted persons. At the Mariposa Big Tree Grove Muir and Roosevelt left with two packers for a brief camping trip along the northern rim of the valley. On this trip Muir had plenty of opportunity to discuss his plan of recession and it received Roosevelt's approval. He also discussed the proposal with Governor Pardee, who agreed to assist.

Muir went on his world trip with Sargent and when he returned was ready to urge his recession idea. At his request, I prepared a draft of a bill which was introduced in the State Legislature, which met early in January, 1905. Public sentiment had been sounded out and was found to be strongly in favor of the recession. However, the State Commission then in charge of Yosemite Valley would, as a result, lose their jobs, and very powerful opposition naturally developed from this source. The Sierra Club issued a circular which explained the reasons for the recession and these met with general approval.<sup>4</sup> However, one of the leading San

<sup>4</sup> Published in *S. C. B.*, January, 1905, 4:3, pp. 242-250.

Francisco daily newspapers took up the fight for the State Commission, and the first day that the Legislature met the whole front page was taken up with a picture of Yosemite Falls, and an inscription which would lead one to believe that Yosemite Valley was to be taken bodily out of the State and moved back to Washington, or to some remote region. Thereafter during the campaign this newspaper devoted daily practically a whole page to statements by the opposition and illustrations.

As Secretary of the Sierra Club, a considerable burden of this campaign of recession fell upon me. I saw at once that though public sentiment was heavily in favor of the change, yet the personal political interest opposed to it was so strong that the bill was liable to be defeated unless powerful influence were brought to bear in its behalf. At that time it was well known that the Southern Pacific Railroad Company had great influence in legislative proceedings. I therefore suggested to Muir that he should at once write to E. H. Harriman, President of the Company, with whom he had formed a warm friendship while on the famous Harriman Expedition to Alaska in 1899. Muir did this, explaining to Harriman in detail the reasons for the recession. Harriman immediately wired out to his representatives on the Coast and directed them to do what they could to assist in the bill's passage. Even with this assistance it was a close matter. John Muir and I took nine trips together to Sacramento, "lobbying" for the bill. We appeared before various committees to explain the reasons for its passage and talked with individual Senators and Assemblymen.

We were accompanied on some of our trips by a distinguished looking gentleman by the name of Briggs, with a long gray beard who, in his earlier days had been a clergyman and who was at that time a representative of what has since become the State Chamber of Commerce. He and Mr. Muir struck up quite a friendship but, though he strongly favored the recession, every now and then he would become very dubious over the outcome. During these pessimistic moods his favorite expression, uttered with great lugubriousness, was "and all this shall pass away." Afterwards Muir would take great delight in imitating him, repeating this phrase in the saddest tone he could command. Another source of genuine assistance was H. H. McNoble, of Stockton, who was then Grand President of the Native Sons. It was largely



*On the E. flank of the Sierra  
between Mts. Patten & Lyell.*

From a drawing by John Muir



SIERRA CLUB COMMISSARY—A DYNAMIC MOMENT  
By Marion R. Parsons



SIERRA CLUB PACK TRAIN—PACKING-UP  
By Marion R. Parsons



ICE FORMATIONS AT THE NEW "GEYSER," CASA DIABLO HOT SPRINGS  
JANUARY 12, 1938  
By David B. Brown



THE CASA DIABLO "GEYSER"

By David R. Brower



HURD PEAK, HEADWATERS OF BISHOP CREEK  
By Norman Clyde

HUED PEAK, HEADWATERS OF BISHOP CREEK

By Norman Clyde

SIERRA CLUB BULLETIN, VOL. XXIII.

PLATE VIII.



LOOKING WEST FROM TABLE MOUNTAIN (BISHOP CREEK)

By Norman Clyde



CURIOUS FORMATIONS OF A SNOW SHEET ON THE EASTERN SIDE OF TUOLUMNE PEAK. JULY, 1937

By Ervin F. McEvoy

due to his influence that this organization adopted resolutions favoring our bill. While in Sacramento, Mr. Muir and I enjoyed the delightful hospitality of Robert B. Marshall and his wife. We made their home our headquarters, and Mr. Marshall, who was then topographic representative of the United States Geological Survey on the Pacific Coast, had many friends in the legislature and helped our cause most effectively. As I look back on this, our first lobbying experience, I realize how poorly equipped we were to deal with the wiles of politicians. Few of them had even heard of John Muir or were interested in our problem on its own merit. Its success meant the abolishment of State jobs and that was a hard feature to overcome.

On our first trip to Sacramento I was taken into the Senate lobby by our good friend, J. Arthur Elston, one of the secretaries to Governor Pardee. He afterwards represented Alameda County in Congress and did splendid work for the Club in Washington. He introduced me to one of the Senators from San Francisco, to whom I briefly explained the reasons for favoring the recession of the Valley to the Federal Government. I could see that the Senator was rather puzzled and had difficulty in comprehending which side I represented. When it finally dawned on him which side I favored he blurted out "I'm agin it." This Senator, with three others, was convicted of accepting a bribe in another matter before the vote on our bill was taken, so his vote was never cast against the bill. The incident merely gives an idea of what we were "up against."

The bill was referred to the Public Lands Committee of the Senate, and John Muir and I persuaded several influential members of the Club to attend the hearing on the bill. As I recall it, Warren Olney, Sr., E. T. Parsons, J. N. Le Conte, and others were there. There was great interest over the report of this committee because it was supposed to throw some light on the fate of the bill. The bill was finally reported favorably by a two to one vote. Muir and I were called to Sacramento on so many occasions that it became a very tiring procedure. We expected the bill to be called up for passage early in the session. Instead of that we would find on arriving in Sacramento that its consideration would be put over until a later date. We later found that this was a part of the strategy and that the railroad company wished to get its

important legislation out of the way before subjecting the men it could rely on to the bitter criticism that was emanating from the opposition. A part of the railroad company's tactics we later found was to allow some of its well-known representatives to talk against the bill, and among these were the best orators in the legislature. This gave us considerable cause for worry, but as I look back on it I realize that it was only a part of the game. I remember that one day I went to Mr. William Herrin, who was Chief Counsel for the Southern Pacific Company in California, and reported to him the situation as I had found it at Sacramento and told him that "Charlie" Shortridge, Senator from San Jose, had made some very eloquent speeches against the bill, picturing the "golden-haired girls, and the golden poppies in the Golden State of California," and arguing that somehow or other all this beauty was to be destroyed by the removal of the Yosemite Valley to Washington. Mr. Herrin smiled in an amused way, and asked if we did not have some friends in Santa Clara County who could bring pressure to bear on Senator Shortridge. We immediately started to work and through President David Starr Jordan of Stanford, and the Sempervirens Club at San Jose, we bombarded Senator Shortridge with letters and telegrams so that when the bill came to a final vote in the Senate and one vote was needed to carry the bill, Senator Shortridge, apologizing for his change of attitude, stated that so many of his constituents had requested him to vote in favor of recession that he was surrendering his personal convictions to the will of his constituents.

The bill was called up in the Assembly and passed there without great difficulty by a considerable majority, but the close vote in the Senate was delayed until toward the end of the session. I will always recall that I spent so much time in Sacramento that my first son was born while I was there. Arthur Elston humorously suggested that he be named "Recession Bill" because of the reason that kept me away from my home at that critical time.

Finally the bill came to a vote in the Senate. Senator John Curtin, called by his fellow Senators "Constitutional John" because of his propensity to cite the United States Constitution and decisions of the United States Supreme Court on all occasions, led the fight for the opposition. He was attorney for most of the concessionaires in the Valley, including the stage lines, and they were

naturally apprehensive as to what might happen under a change from State to Federal administration. The report was current in Capitol circles that "Constitutional John" was "burning the midnight oil" in the State law library in preparation for his argument against recession. When the eventful day arrived he had been loaned desks of the Senators immediately surrounding his, and all of them were piled with law books, mainly United States Supreme Court Reports. The trend of his argument, which took most of the day, was that the recession was unconstitutional and illegal from several standpoints. Senator Belshaw was the principal advocate for recession and had introduced the bill at our request, as had Assemblyman Estudillo, from the South, in the Assembly. Dr. Rowell, Senator from Fresno, and uncle of Chester Rowell of the San Francisco *Chronicle*, and William H. Waste, then Assemblyman from Berkeley, now Chief Justice of the Supreme Court of California, were among those who aided our cause most effectively. As near as we could check up on the Senators, we could count on twenty votes and we needed one more vote. When the vote was taken we had the minimum number required for its passage, namely, twenty-one, as I recall it. The vital vote was cast by Senator Shortridge of San Jose. The bill went to Governor Pardee for signature and was signed on March 3, 1905. John Muir wrote the following letter to Johnson as soon as the bill had passed the Senate:

Martinez, February 24, [1905].

Dear Mr. Johnson:

I wish I could have seen you last night when you received my news of the Yosemite victory, which for so many years, as commanding general, you have bravely and incessantly fought for.

About two years ago public opinion, which had long been on our side, began to rise into effective action. On the way to Yosemite [in 1903] both the President and our Governor were won to our side, and since then the movement was like Yosemite avalanches. But though almost everybody was with us, so active was the opposition of those pecuniarily and politically interested, we might have failed to get the bill through the Senate but for the help of Mr. H., though, of course, his name or his company were never in sight through all the fight. About the beginning of January I wrote to Mr. H. He promptly telegraphed a favorable reply.

Wish you could have heard the oratory of the opposition—fluffy, nebulous, shrieking, howling, threatening like sandstorms and dust whirlwinds in the desert. Sometime I hope to tell you all about it.

I am now an experienced lobbyist; my political education is complete. Have attended Legislature, made speeches, explained, exhorted, persuaded every mother's son of the legislators, newspaper reporters, and everybody else who would listen to me. And now that the fight is finished and my education as a politician and lobbyist is finished, I am almost finished myself.

Now, ho! for righteous management . . . Of course you'll have a long editorial in the *Century*.

Faithfully yours,

JOHN MUIR.

We thought that the hard-fought battle was won but little did we realize the difficulties that were still in store for us. It seemed a comparatively simple matter to get Congress to accept the recession of the Valley in view of all the cogent reasons for it. The Sierra Club prepared a petition addressed to the President and to the members of Congress setting forth these reasons.<sup>5</sup> When the resolution which had been introduced in the House came up for consideration it was during the regime of Speaker Cannon. He was a veritable czar in the House and was opposed to what he considered unnecessary Federal expenditures. He had little sympathy for parks, deeming them an unnecessary luxury, so that when this resolution came up on the calendar he failed to recognize its sponsor and under the rules nothing could be done to bring it before the House for consideration. We were at once apprised of this situation and I told Mr. Muir that it was necessary to call on his good friend Harriman again. He at once wired to Harriman advising him of the situation and two or three days later the California sponsor of the resolution was recognized and it passed the House without serious opposition.

Again we felt sure that all our troubles were behind us, but again we were doomed to disappointment. Senator George C. Perkins, representing California, was still in the Senate and by reason of seniority was one of the most powerful senators there. He had charge of the recession resolution, which was automatically

<sup>5</sup> *S. C. B.*, January, 1906, 6:1, pp. 58-61.

referred to the Public Lands Committee. The Chairman of the Public Lands Committee, a senator from one of the Dakotas, had visited California and the Yosemite National Park the summer previous and had become interested in the problems of the Yosemite Valley Railroad. The bill before the Senate provided for the elimination of a corner of the park along the western border, which would have permitted the Southern Pacific Company to build a rival road from Fresno, via Wawona, to the vicinity of El Portal. For this reason the senator, as Chairman of the Public Lands Committee, would not allow the bill to be reported out of the committee and an impasse was created. Again we were advised of this difficulty and again John Muir appealed to Mr. Harriman. We also wrote to all the senators. Senator Perkins was equal to the occasion. Being assured of enough votes, when a bill came before the Senate providing for the current expenses for the District of Columbia, he moved that the Yosemite recession resolution be called out of committee and substituted in its place. Because of his prestige and friendships he was able to command the large vote which was necessary to bring about this substitution and the recession resolution came before the Senate to be voted on and passed without serious opposition. President Roosevelt signed it on June 11, 1906, as he had promised John Muir he would in the Yosemite woods in 1903. Not long after, the army detachment in command of Major Benson, which up to that time had been stationed at Wawona, proceeded into the Valley and took possession in the name of the Federal Government. Major Benson told me that this was one of the happiest days of his life, because he was always very fond of Yosemite and realized better than anyone else the difficulties of administering the surrounding National Park with the Valley in its very heart under State jurisdiction.

# A CLIMBER'S GUIDE TO THE HIGH SIERRA

## PART II

### THE RITTER RANGE

MOUNT DAVIS, BANNER PEAK, MOUNT RITTER,  
THE MINARETS, IRON MOUNTAIN

By WALTER A. STARR

*Assisted by Jules Eichorn, Glen Dawson, William Rice, and Ansel Adams,  
and the Climbing Notes of Walter A. Starr, Jr.*

EXTENDING southeasterly from Mount Lyell (U. S. G. S. map, Mount Lyell Quadrangle) a high, rugged spur, the Ritter Range, separates the headwaters of the Middle Fork and the North Fork of the San Joaquin River. These streams here flow southward until the Middle Fork, bending westward around the southern termination of the Ritter Range at Iron Mountain, meets the North Fork, whence they continue on their way down the western slope of the mountains. In this region the main Sierra Crest, flanking the Middle Fork on the east, sags and surrenders its Alpine summits and scenic attractions to the Ritter Range whose peaks rise to an elevation of twelve to thirteen thousand feet, being two to three thousand feet higher than the Crest. The explanation for this is given in a most interesting article by François E. Matthes in *Sierra Club Bulletin*, 1930, 15:1, pages 1 to 8. The Ritter Range is a remnant of an ancient mountain system and, as Mr. Matthes writes, "when you climb Mount Ritter you climb the core of one of the ancestral mountains that were formed more than a hundred million years before the present Sierra Nevada was uplifted."

Geologically the Ritter Range is composed of dark mottled rocks representing ancient lavas, highly metamorphosed, associated with a complex of dark igneous rocks. This tough rock has resisted the forces of erosion through the ages, which accounts for the height of the range. The joint-planes generally are vertical, or at high angles, with northwesterly trends. This structure accounts for the almost vertical faces and knife-edge ridges which are characteristic of the range, having smoother faces and higher-angle walls, with less debris in chutes and on ledges, than is

usually found by climbers on the granite summits of the Sierra. Caution is called for in climbing, due to the danger of loose blocks or slabs which may pull away from the faces.

Mount Davis is the most northern peak of the range and Iron Mountain the most southern. Midway rises the Ritter Group of peaks—Banner, Ritter, and The Minarets.

The John Muir Trail passes along the eastern side of the range close to its base. Here lie several lakes, famed for their beauty—Thousand Island, Garnet, Ediza, Shadow, Upper and Lower Iceberg, and Minaret. The nearest approaches by road are Silver Lake, Agnew Meadow, and Devils Postpile. Good campsites will be found above the western end of Lake Ediza (elev. 9,400 ft.) and on the meadows of Shadow Creek above (elev. 9,000 ft.). More exposed campsites may be found at Garnet Lake (elev. 9,700 ft.) and Thousand Island Lake (elev. 9,850 ft.). There are good campsites on upper Minaret Creek (elev. 9,000 to 9,500 ft.) from which to approach the southern end of The Minarets. For detailed information concerning approaches and trails see Starr's *Guide to the John Muir Trail and the High Sierra Region*, at pages 41 to 46, 50 to 54, and 59; and map of trails.

Although peaks of this range had been climbed for many years, no pinnacle of The Minarets was climbed until 1922. Since 1931, by application of sound rock-climbing methods, the difficulty and danger has been greatly lessened, and most of those pinnacles have been ascended.

The Ritter Group of peaks offers one of the finest climbing regions in the Sierra Nevada, and it is also endowed with unusual grandeur, beauty and fascination. Banner and Ritter are twin peaks, connected by a saddle. To the east a cliff drops off from the saddle. Sloping northwestward from the saddle, North Glacier covers the floor of the chasm between the two peaks, flowing down to North Glacier Lake. Half a mile south of this lake and lapping the western base of Ritter lies Ritter Lake. Beyond and somewhat above, another lakelet is fed by Southwest Glacier which fills a rugged amphitheatre on the north side of a bold jagged spur extending southwesterly from the summit of Ritter. The highest point on this arête might be regarded as the western summit of Ritter. On the southeast side of Ritter, draining into Lake Ediza, Southeast Glacier slopes steeply down, enclosed in an amphi-

theatre bounded on the north by the sheer face of the peak and on the south by pinnacles extending downward from the crest of a spur which dips southeastward from the summit to a saddle. South of this saddle the knife-edge ridges of The Minarets, crowned with many pinnacles, split the sky. At its southern end the ridge forks into two groups of minarets, the eastern dominated by Clyde Minaret and the western by Michael Minaret—the two highest pinnacles. Between them a remarkable amphitheatre is formed by their sheer walls, in which lies a small ice lake. Several small glaciers lie along the sloping walls of the eastern base of The Minarets.

## REFERENCES

*Sierra Club Bulletin*: 1894, 1:3, pp. 66-70; 1905, 5:3, pp. 186-193; 1908, 6:5, pp. 290-306; 1922, 11:3, p. 248; 1924, 12:1, pp. 28-33; 1930, 15:1, pp. 2-8, 17-18 1934, 19:3, pp. 81-85.

Whitney: *The Yosemite Book*, 1868, p. 98; *The Yosemite Guide Book*, 1869 (1870), pp. 101-109.

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Farquhar: *Place Names of the High Sierra*, 1926, pp. 4, 19, 66, 79.

Le Conte: "An Ascent of Mt. Ritter," in *Appalachia*, Feb. 1893, 7:1, pp. 1-8.

Solomons: "Unexplored Regions of the High Sierra," in *Overland Monthly*, May 1896.

## PHOTOGRAPHS

*Sierra Club Bulletin*: 1908, 6:5, pls. 67, 69, 70; 1919, 10:4, pl. 238; 1924, 12:1, pls. 13, 14; 1930, 15:1, pls. 1, 13, 14, 17, 19, 22, 29; 1932, 17:1, pl. 11.

## PRINCIPAL PASSES

The Ritter Range may be approached from the North Fork of the San Joaquin River on its western side, but by far the nearest and most interesting approaches are from the trails leading to its eastern side. To cross the range several passes are available.

*No. 1. Glacier Lake Pass, E. to W.* First class. From head of Thousand Island Lake ascend to saddle between Banner Peak and Mount Davis, keeping to side of basin toward Davis. North Glacier Lake lies on the saddle. Easy rocky slopes on W. side.

*No. 2. Banner-Ritter Saddle, E. to W.* Second class; ice-ax

useful (seasonal). From Lake Ediza, or Garnet Lake, ascend to the basin lying E. of the cliff between Banner and Ritter. Climb the cliff to the saddle, keeping to right of black stains made by water-course near middle of cliff, by a series of zig-zag ledges. From saddle descend on N. side of glacier to the E. end of North Glacier Lake.

*No. 3. Ritter Pass, E. to W.* First class. From Lake Ediza ascend the cliff SW. of the lake to the saddle between Ritter and Waller Minaret. Easy, rocky slopes on W. side.

*No. 4. The Gap, E. to W.* Second class; ice-ax usually needed. From Lake Ediza climb cliff or chimneys below the gap S. of Waller Minaret, and ascend small glacier to the gap. Steep talus slopes on W. side.

*No. 5. North Notch, E. to W.* Second class; ice-ax useful (seasonal). From Lake Ediza ascend SW. up the stream which enters head of lake to easy ridge leading toward the notch (lowest point) between Leonard and Dawson minarets. Climb chute to notch, one small chock stone. This is the shortest route to W. side of highest minarets from Ediza. Rough, steep talus slope extends along W. base of Minarets.

*No. 6. South Notch, E. to W.* Second to third class (seasonal); ice-ax needed. To approach from Minaret Lake, ascend the stream entering head of lake to bench above SW. end of Upper Iceberg Lake. To approach from Lake Ediza, ascend the stream on the S. side of the lake to Lower Iceberg Lake. Traverse on E. side of lake and climb up to basin of Upper Iceberg Lake. Traverse on W. side to bench above SW. end of that lake.

From the SW. end of Upper Iceberg Lake ascend the steep slope (snow conditions seasonal) to the col or notch between C Minaret and D Minaret, which rise just S. of Clyde Minaret. A prominent pinnacle stands above the N. side of the notch. Traverse W. from the notch into Minaret Amphitheater containing small ice lake. Ascend to col on SE. side of Michael Minaret and descend chute (fourth class) to base (western side) of that minaret. To reach this point by the long route (first class) from the Amphitheatre, circle Adams Minaret to the S. and W. and then cross spur ridge to the N., keeping well to W. to avoid difficult chutes on N. side of spur.

*No. 7. Beck Lakes Pass, S. to N.* First class. From the NW. side of Upper Beck Lake ascend NW. up talus, rocks, and snow-slopes to saddle. Cross basin at head of Iron Creek and cross spur ridge extending SW. from Adams Minaret at low point to head of Dike Creek. Or, ascend to upper end of basin of Iron Creek into Minaret Amphitheatre and proceed as from South Notch. There is a trail from Devils Postpile to Lower Beck Lake.

#### PEAKS

*Mount Davis (12,314). East Slope.* Second class. First ascent, August 28, 1891, by Milton F. Davis (*S. C. B.*, 1926, 12:3, p. 305), although may have been climbed by John Muir earlier. There is an easy route from Thousand Island Lake up and along the summit ridge above Island Pass. Ascend SW. along the ridge to final summit climb.

*Banner Peak (12,963). Route 1—North Glacier and Southwest Slope.* First class. First ascent, August 26, 1883, by Willard D. Johnson, John Miller, U. S. G. S. (*S. C. B.*, 1905, 5:3, p. 193). From Thousand Island Lake, ascend to the E. end of North Glacier Lake (see Pass No. 1), climb the rocks to the N. edge of the glacier lying between Banner and Ritter, and ascend the glacier on that side to the saddle at its head, just short of the E. cliff. Thence ascend steep talus slopes and easy rocks to summit.

———*Route 2—East Cliff and Southwest Slope.* Second class. From Lake Ediza, or Garnet Lake, climb to saddle between Banner and Ritter (see Pass No. 2), thence to summit as on Route 1.

———*Route 3—East Face.* Fourth class. First ascent, August 3, 1931, by Jules M. Eichorn, Robert L. M. Underhill (*S. C. B.*, 1932, 17:1, pp. 114-115). From Garnet Lake start up the chimney to the left of the buttress to the S. of Banner Glacier. Leave the chimney and take to the ridge N. of the chimney leading up from the buttress. Climb the ridge until an overhang makes the ridge look impossible. Traverse diagonally right upward about 80 feet along a rather smooth wall, and then climb broad steep chutes or faces to the summit.

*Mount Ritter (13,162). Route 1—North Glacier and North Face.* Second class. First ascent, October 1872, by John Muir (*The Mountains of California*, 1894, pp. 52-73). From Thousand



MOUNT RITTER AND BANNER PEAK FROM THE SOUTHEAST  
Drawn by Leland Curtis

Island Lake proceed as on Route 1 for Banner Peak, to saddle between Banner and Ritter. Ascend snow-field to the right hand or W. chute of two chutes leading up N. wall of Ritter. From top of chute cross ridge to left into head of the left hand chute to a wide ledge leading diagonally left to the arête. Thence follow arête W. to summit.

———*Route 2—East Cliff and North Face.* Second class. From Lake Ediza, or Garnet Lake, proceed as on Route 2 for Banner Peak, to saddle between Banner and Ritter, thence same as Route 1 for Ritter.

———*Route 3—Glacier Lake Pass—Ritter Lake—West Slope.* First class. First ascent, August 20, 1892, by Theodore S. Solomons (*S. C. B.*, 1894, 1:3, pp. 69-70) From Thousand Island Lake proceed to North Glacier Lake (see Pass No. 1). Thence around W. side to Ritter Lake. Climb the W. slope (various routes) leading to summit.

———*Route 4—Southeast Glacier—South Side.* Second to third class; ice-ax useful. First ascent, June 28, 1928, by Norman Clyde (*S. C. B.*, 1929, 14:1, p. 87). From Lake Ediza proceed to the base of the cliffs slightly to the left (S.) of the lower end of the glacier. Climb cliff to the left of the lowest of the pinnacles on the S. side of the glacier. Pass through gap above the lowest pinnacle onto glacier. Continue up on S. side of glacier, keeping to left of ice ridge which extends from lower part to upper part of glacier, until crevasse renders further travel upward on glacier impossible. Leave S. side of glacier, climb over ice ridge and descend across the glacier (use ice-ax for safety) to its extreme NW. edge, whence ascend easy rocks and talus slope to the summit.

———*Route 5—Southeast Glacier—North Side.* Second to third class (seasonal); ice-ax may be needed when snow is high on the glacier. Evidently this was John Muir's route of descent in October 1872. First known ascent, August 3, 1931, by Sierra Club party led by Lewis Clark and Ernest Dawson (*S. C. B.*, 1932, 17:1, p. 115). From Lake Ediza proceed to the snout of the glacier, thence up talus at base of the cliff of Ritter along the N. side of the glacier to a chimney which leads up to the talus slope extending NW. to the summit.

*Pinnacles (Highest Pinnacle, 12,300).* Third class. First ascent of highest pinnacle, August 4, 1936, by Richard M. Jones, William Rice. From Lake Ediza proceed as on Route 4 for Ritter to lowest pinnacle. After crossing through gap above, contour W. a short distance and climb highest pinnacle by one of several possible routes.

*Ritter—Southwest Spur.* No recorded ascents of several summits on the arête.

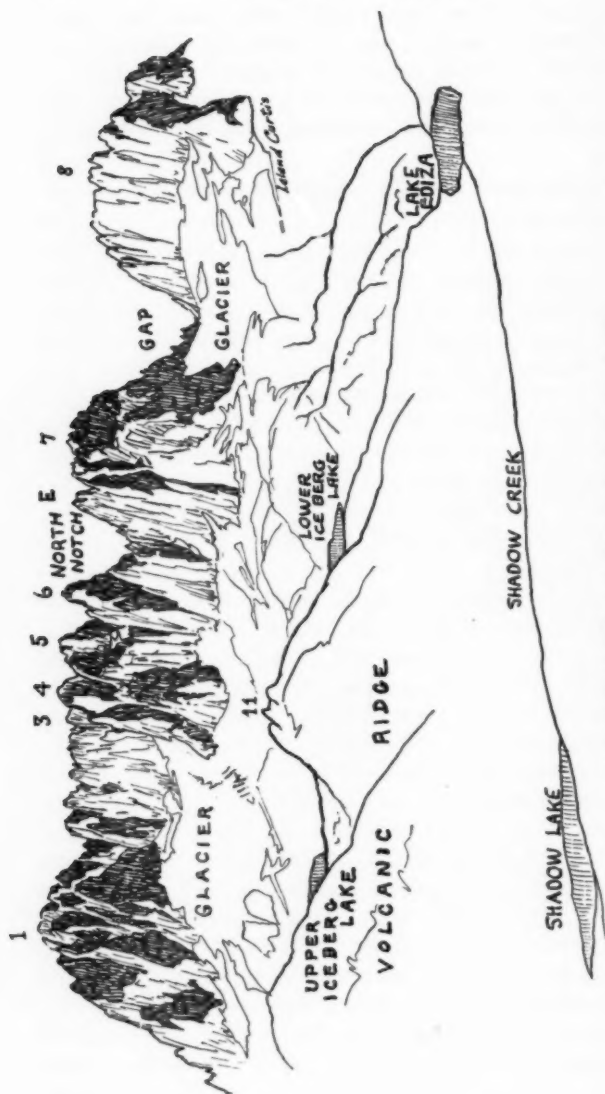
#### MINARETS

*No. 1—Clyde Minaret (12,284). Route 1—Glacier.* Third class; ice-ax needed. First ascent, June 27, 1928, by Norman Clyde (*S. C. B.*, 1929, 14:1, p. 87). From Minaret Lake, or from Lake Ediza, proceed to the NW. end of Upper Iceberg Lake (see Pass No. 6) and climb around base of the minaret to the glacier. Ascend glacier to near its head, using ice-ax; cross over to rocks. (Seasonal difficulty of bergschrund must be considered.) Climb rocks diagonally left across a series of broad chutes and slight ridges to just below summit, thence up chimney to summit arête. Summit about 30 yards to left along toothed edge of arête. Variations are possible.

———*Route 2—Rock Route.* Third class. First ascent, July 26, 1929, by Glen Dawson, John Nixon, William A. Horsfall (*S. C. B.*, 1930, 15:1, pp. 109-110). A variation of Route 1 and a preferable route. From the NW. end of Upper Iceberg Lake traverse to the first chute S. of the ice-field. Ascend chute to near its head and climb diagonally left to summit as on Route 1.

———*Route 3—East Face.* Fourth class. First ascent, August 8, 1932, by Walter A. Starr, Jr., solo (*S. C. B.*, 1934, 19:3, p. 82; Starr's *Ms. Records*, p. 8). From the SW. end of Upper Iceberg Lake, turn into amphitheatre at base of the minaret. On right side of cirque are three high points. Work up ledge in red rock into narrow chute. Chute comes out on ledge running across E. face of minaret. Proceed up along ledge to second chimney and climb chimney until progress becomes impossible. Diagonal to right up ledges, ridges, and chimneys onto arête to N. of summit of minaret, thence along arête to summit.

*No. 2—Michael Minaret (12,280). Route 1—Michael's Chute.* Fourth class. First ascent, September 6, 1923, by Charles W.



EAST FACE OF THE MINARETS FROM SHADOW CREEK

Drawn by Leland Curtis

1. Clyde Minaret  
 2. Nicholson Minaret  
 3. Rice Minaret

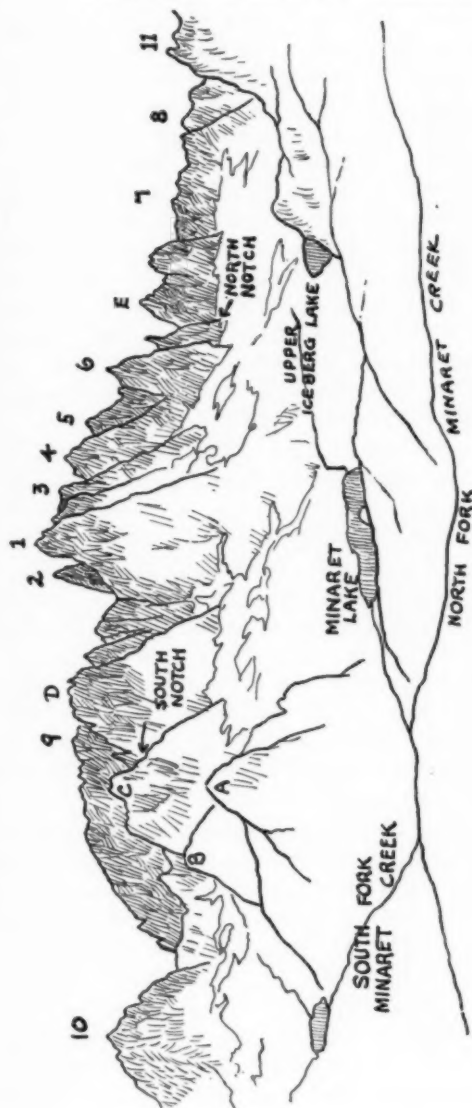
4. Bedayan Minaret  
 5. Dawson Minaret  
 6. Leonard Minaret

7. Waller Minaret  
 8. Jensen Minaret  
 9. Volcanic Peak

9. Waller Minaret  
10. Starr Minaret  
11. Volcanic Peaks

Bedayun Minaret  
5. Leonard Minaret  
6. Leonard Minaret

1. Clyde Minaret  
2. Michael Minaret  
3. Eichorn Minaret  
4. Rice Minaret



THE MINARETS, FROM MINARET CREEK

Drawn by Leland Curtis

9. Adams Minaret  
10. Starr Minaret  
11. Volcanic Peaks  
E. Jensen Minaret

5. Bedayun Minaret  
6. Leonard Minaret  
7. Leonard Minaret  
8. Waller Minaret

A, B, C, D—Unnamed, probably unclimbed

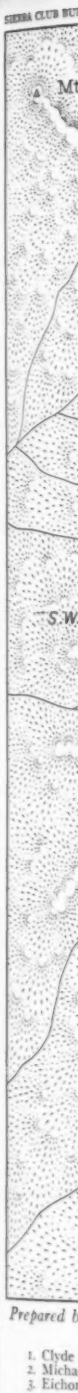
Michael, solo (*S. C. B.*, 1924, 12:1, pp. 28-33). From Lake Ediza (see Pass No. 5), or Minaret Lake (see Pass No. 6), proceed to the W. base of Michael Minaret. Climb the deep, narrow chute leading to the skyline directly N. of the main pinnacle. From 200 to 300 feet up the chute, large chock stones are encountered. A third wedged boulder can be surmounted by a series of projections starting about 30 feet below the boulder. These projections bring one to a ledge leading back into the chute above the boulder. A less difficult route is by a shoulder stand over the "ladder with the lower rungs missing" nearer the huge boulder. Continue up the chute to The Portal at its top between Michael Minaret and two large spires. From The Portal follow a ledge going E. on the minaret away from the chute and then work back up steep, difficult, exposed rocks to the summit. It is also possible but very difficult to work directly up from The Portal to the summit.

———*Route 2—Eichorn's Chute.* Third class. First ascent, August 16, 1933, by Glen Dawson, Jules Eichorn, Richard M. Jones (*S. C. B.*, 1934, 19:3, p. 83). Go up first chute N. of Michael's Chute, meeting Route 3 near top of chute.

———*Route 3—Starr's Chute.* Third class. First ascent, August 3, 1933, by Walter A. Starr, Jr., solo (*S. C. B.*, 1934, 19:3, p. 83). Go up the second chute N. of Michael's Chute to a point about 300 feet below the main crest. There cross to right into a branch chute leading up the S. side of Eichorn Minaret. When near head of chute cross to right into head of Eichorn's Chute, thence cross ridge of rock into Michael's Chute, just below the two spires. Thence follow Route 1 to summit. This seems to be the best mountaineering route to The Portal.

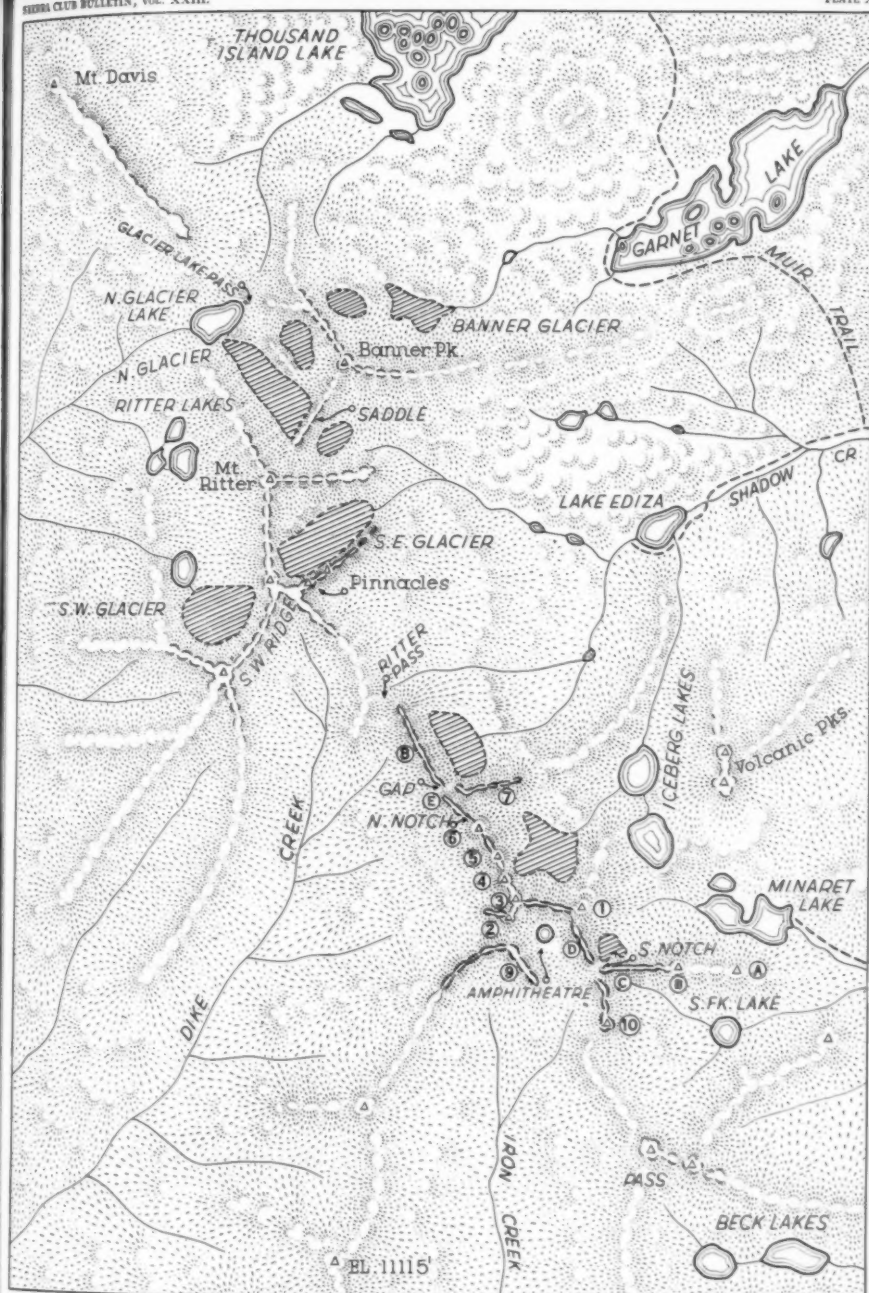
———*Route 4—Clyde's Ledge.* Third class. First ascent, August 25, 1933, by Norman Clyde, solo (*S. C. B.*, 1934, 19:3, p. 84). From SW. base of Michael's Minaret ascend cliff to ledge which leads around minaret into Michael's Chute at a point just above the 40-foot drop over the big chock stone. Continue up as on Route 1.

*No. 3. Eichorn Minaret (12,000).* Third class. First ascent, July 31, 1931, by Jules M. Eichorn, Glen Dawson, Walter Brem (*S. C. B.*, 1932, 17:1, p. 114). This minaret is located at the junction where the minaret ridge divides into an E. and W. spur.



Prepared by

1. Clyde  
2. Michael  
3. Eichorn



Prepared by W. A. Starr

Drawn by W. B. Wheeler

## MAP OF THE RITTER RANGE, SIERRA NEVADA

1. Clyde Minaret
2. Michael Minaret
3. Eichorn Minaret

4. Rice Minaret
5. Bedayan Minaret
6. Dawson Minaret
7. Leonard Minaret
8. Waller Minaret
9. Adams Minaret

10. Starr Minaret
11. Volcanic Peaks
- E. Jensen Minaret

A, B, C, D. Unnamed, probably unclimbed



THE MINARETS FROM THE AIR

By Francis F. Farquhar

THE MINARETS FROM THE AIR

By Francis P. Farquhar

SIERRA CLUB BULLETIN, VOL. XXIII.  
D I

PLATE XII.  
The Cap 8

7

E

N. Notch

6

5

4

3



THE MINARETS, FROM VOLCANIC RIDGE  
(See map, Plate X, for identification of peaks)

By Walter A. Starr



LOOKING WEST ACROSS MINARET LAKE  
By Ansel Adams

LOOKING WEST ACROSS MINARET LAKE

By Ansel Adams

SIERRA CLUB BULLETIN, VOL. XXIII.

PLATE XIV.  
D

C

B

A



LOOKING SOUTHWEST ACROSS MINARET LAKE

(See map, Plate X, for identification of peaks)

By Ansel Adams

SIERRA CLUB BULLETIN, VOL. XXIII.

PLATE XV.



CLYDE MINARET AND UPPER ICEBERG LAKE  
FROM VOLCANIC PEAKS

By Ansel Adams

SIERRA CLUB BULLETIN, VOL. XXIII.

PLATE XVI.

CLYDE MINARET AND UPPER ICEBERG LAKE  
FROM VOLCANIC PEAKS

By Ansel Adams

SIERBA CLUB BULLETIN, VOL. XXIII.

PLATE XVI.

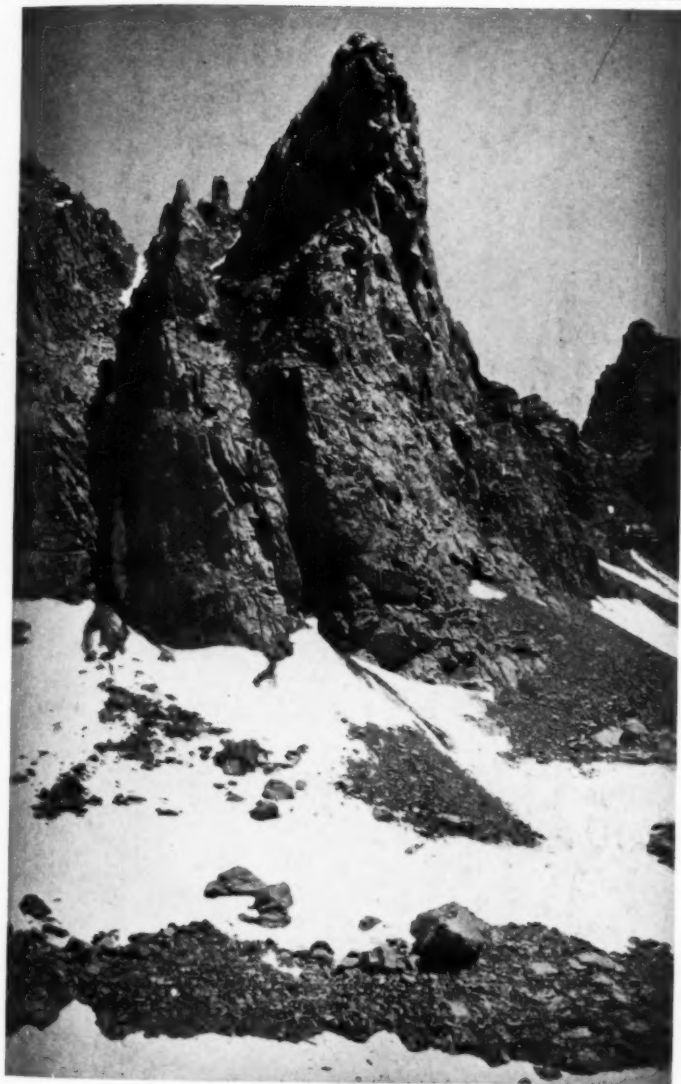


VOLCANIC PEAKS AND UPPER ICEBERG LAKE

By Ansel Adams



POINT "A"  
LOOKING SOUTH ACROSS MINARET LAKE  
By Walter A. Starr



MICHAEL MINARET FROM THE WEST

By Walter A. Starr



MICHAEL MINARET, FROM THE SOUTH

By Ansel Adams



MICHAEL MINARET, FROM THE AMPHITHEATRE

By Ansel Adams



LOOKING INTO THE AMPHITHEATRE FROM STARR MINARET  
(See map, Plate X, for identification of peaks)

By Walter A. Starr



THE RITTER RANGE, FROM IRON MOUNTAIN

By Walter A. Starr



SOUTHWEST GLACIER AND RITTER LAKES. WEST SIDE OF MOUNT RITTER, LOOKING SOUTH  
By Ansel Adams



SOUTHWEST SPUR OF RITTER, FROM ARÊTE NORTH OF MICHAEL PORTAL

By Walter A. Starr



AT THE HEAD OF SHADOW CREEK, MOUNT RITTER AND BANNER PEAK  
By Ansel Adams

From  
Mi  
Mi  
up  
A  
11,  
Ch  
N.  
A  
Aug  
from  
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From it one arête goes E. to Clyde Minaret and one S. to Michael Minaret. The summit may therefore be reached from Clyde or Michael by a traverse along the arête, or may be climbed directly up either Eichorn's Chute or Starr's Chute (see Michael Minaret).

*No. 4. Rice Minaret (12,000).* Third class. First ascent, August 11, 1936, by William Rice, Torcom Bedayan. Ascend Starr's Chute, as on start of Route 3 for Michael, and climb the minaret N. of the head of this chute.

*No. 5. Bedayan Minaret (11,900).* Third class. First ascent, August 11, 1936, by Torcom Bedayan, William Rice. Traverse from Rice Minaret to next minaret north.

*No. 6. Dawson Minaret (11,800)—Southwest Face.* Third class. First ascent, August 16, 1933, by Glen Dawson, Jules M. Eichorn, Richard M. Jones (*S. C. B.*, 1934, 19:3, pp. 83, 99). From North Notch (see Pass No. 5) work along the W. side of the first minaret S. and traverse around it into chute. Climb directly toward the summit, up broken face where one difficult pitch will be encountered.

*No. 7. Leonard Minaret (11,500). Route 1—Southeast Rock Chimney.* Fourth class. First ascent, August 4, 1932, by Richard M. Leonard, H. B. Blanks. From Lake Ediza proceed on route toward North Notch (see pass No. 5). When ascending the benches above (W.) of Lower Iceberg Lake, Leonard Minaret will be seen on the right as a sharp spire, being the abrupt termination of a narrow arête projecting E. at right angles to the main crest. A prominent snow-filled chimney will be noted on the right center of the terminus of the arête. The best route on this face is up a less prominent rock chimney left (S.) of the snow-chimney, to a conspicuous ledge on the NE. face of the arête at the head of the snow-chimney. Climb this face diagonally to the left (SE.) to the crest, thence along the arête E. to the cairn and register above the terminus.

———*Route 2—Traverse W. to E.* Third class. First ascent, August 19, 1933, by Norman Clyde, solo. From the Gap (see Pass No. 4) up the ridge of the minaret, and traverse the arête E. to cairn and register at E. end.

*No. 8. Waller Minaret (11,600).* Third class. First ascent, August 1934, by Ted Waller, Jules M. Eichorn. This minaret is

the summit of the ridge between the Gap and Ritter Pass. From the Gap (see Pass No. 4) climb difficult ridge to N. of gap and follow along this airy arête to summit. If the traverse is continued a rope-down is necessary just N. of the summit.

*No. 9. Adams Minaret (11,900).* Third class. First ascent, July 15, 1937, by Ansel Adams, Rondal Partridge. From the col on the SE. side of Michael Minaret above the Minaret Amphitheatre (see Pass No. 6), climb cliffs S. of col to small peak. Thence SE. along crest slope to summit of the minaret.

*No. 10. Starr Minaret (11,600).* Second class. First ascent, July 14, 1937, by W. A. Starr, Ansel Adams, Rondal Partridge. From South Notch (see Pass No. 6) traverse S. to northwest base of the minaret and climb rocky slope to summit.

*Minarets A, B, C, D, and E.* No recorded ascents.

*Volcanic Peaks (11,450).* First class. North Peak—Recorded ascent, August 13, 1933, by Craig Barbash, Howard Gates. South Peak—Recorded ascent, July 12, 1937, by Ansel Adams, Rondal Partridge, W. A. Starr. From the NW. end of Minaret Lake ascend to the saddle N. of the lake and climb rocks to the summit W. of saddle. Or, from Lake Ediza, climb the shoulder of Volcanic Ridge just E. of the stream flowing down from Iceberg Lakes and traverse ridge to summit. Sweeping panorama of the Ritter Range from here.

*Iron Mountain (11,163). Route 1—South Slope.* First class. Many ascents have been made. Recorded ascent on July 28, 1933, by Kenneth May, Elliot Sawyer. Starting on the Devils Postpile trail, just W. of Cargyle Meadow, an old trail works N. up the S. slope to a point just W. of the summit.

———*Route 2—East Face.* First class; ice-ax useful. Ascent, August 2, 1935, by Jules Eichorn, W. A. Starr. From Ashley Lake, which lies at the E. base of the peak, ascend directly up the long snow-tongue from head of the lake, or by way of the spur on the S. side of the lake, to crest. Traverse ridge N. to summit. A trail leads to Ashley Lake from Devils Postpile.

## JUNE MOUNTAINEERING IN THE PALISADES

BY CARL P. JENSEN



ALTHOUGH the grandeur of the Sierra, as seen on the usual summertime trip, may have instilled in you a love for them that seems boundless, an even greater enthrallment awaits you should you visit them in late springtime, when they are still completely snow-mantled. You will cover shorter distances, you will have to find your way without trails, and you will have to carry your complete outfit on your back; but you will be amply rewarded. On the peaks you will find snow-climbing at least as easy as talus-climbing, and the descending much easier. For camping, there is usually a bed-site near trees, where you can get wood, and water is always at hand actually or potentially.

On June 3, 1937, Howard Gates and I began our first spring-time circuit. We went south from Bishop Pass along the west side of the Palisades, and crossed Mather Pass, entirely on snow, climbing peaks as we went. Part way down Cartridge Creek we struck our first clear trail, which we followed back up Le Conte Canyon to Dusy Creek; thence on snow again as we climbed to Bishop Pass. Our ascents of North Palisade, Sill, and Split Mountain, were the earliest on record for any season, but on Middle Palisade Norman Clyde had, in a former year, beaten us by one day.

We wore warm, light-weight clothing, well-oiled boots with tri-couni nails, and carried ice-axes. A warm sleeping-bag, a sweat-suit for sleeping and as extra clothing, a poncho, extra socks, and rubber-soled shoes constituted our individual equipment, and in addition we had a light-weight tent, cooking utensils, camera, small knapsack, U. S. G. S. maps, flashlight, first-aid kit, and eighty feet of climbing rope. Our dried rations were patterned after the list given by Bestor Robinson in the 1937 *Sierra Club Bulletin* (22:1, p. 45). As our packs weighed about seventy-five pounds each at the start, we had occasion to regret the hatchet, field-glasses, and certain sundries, which we found we did not need. We had ideal weather, and our rainproof equipment was not used as such, but we did find it useful in adding warmth to our beds.

We had expected to find the western and southern exposures fairly clear of snow, but on crossing Bishop Pass we found that this was far from the case. Nightfall of the second day found us crossing high on the ridge leading west from North Palisade, at 12,400 feet, and no camp-site in view for a long way ahead. With a candle we melted enough snow for two cups of tea, which relieved an otherwise cold supper. By moving rocks and scooping snow and ice away, we were able to clear a sandy place for our two bags. We slept soundly, despite the chill wind which howled over us from the snowfields below. In the morning we found enough brush for a fire to warm our breakfast, then set out for the climb of North Palisade. We missed the route at one point near the top, by going up a chimney too far to the left. As the going became unexpectedly hard we discovered our error and crossed over. When we finally arrived at the top, only about half an hour of daylight remained. This we used in descending the ridge toward Mount Sill, our next objective. Then, at 14,000 feet elevation, with an icy up-draft blowing from the large glacier below, without food and water, and with only a parka apiece, we sat down to await the dawn. We sat on our rubber-soled shoes, the only use we found for them on the climb, partly insulating our bodies from the cold rocks. We hugged each other, chafed our legs, and stamped our feet to stimulate circulation. At times, one of us would warm up enough to doze off for a few minutes, to be quickly awakened by the cold or by the movements of the other. We speculated upon the hour at which the sun would come up, and dreadingly followed the course of the crescent moon which rose orange-hued in the early morning hours and gradually changed to silver. At last, about 4:15, it became light enough for us to see. We loosened up our joints, uncoiled the rope, and descended to the col. There, as I began to continue our projected climb toward Sill, Gates called to me: "Carl, let's go down to our packs from here and get some *breakfast*, and come back and do Sill later." I needed no persuasion, and we hastened to carry out the most urgent portion of the suggestion. When we arrived at the point, two thousand feet below, where we had left our packs the previous day, the sun was warm on the flat rocks, and we lost no time in climbing into our bags for a much-needed nap.

After a while we got up and moved everything south over two

ridges. We climbed Mount Sill the next day and enjoyed a wonderful view of the range for a long distance in both directions. We continued a little way to the southwest to a peak on which we found a weather-worn record of one other ascent ten years previously. Then we descended to assemble our packs and again push on as far as we could until the light failed. Although we were forced to camp at a considerable distance from Middle Palisade, we made the climb fairly readily by the usual route next day, descending by a precipitous route requiring one rope-down. As we struck across country we found the tracks of a coyote paralleling ours of the morning—the only trace of animals we saw on the snow-covered portions of our trip.

The next day we moved on across Mather Pass, and on the following day climbed Split Mountain. We thought of trying it via the "split," but the sound of a high wind blowing on the peaks caused us to take the easier route up the northern slope. The wind was very cold and strong and forced us to build a small parapet of the talus rock in order to eat our lunch—even then, in discomfort. Nearer the top, we found a recess out of the wind and were able to get warm again before we registered at the summit.

Following our climb of Split Mountain, our thoughts turned to warmer climes and to fishing. Skirting the right hand side of the upper Kings River basin, we made a rather difficult crossing of the divide and made camp by flashlight at the head of Cartridge Creek. The next two days of our trip were through lovely country, with full waterfalls and a profusion of wild flowers. We had a day's good fishing at Grouse Meadows, then climbed up Dusy Creek to a final high camp a mile or so below Bishop Pass. Crossing the pass the following morning, we ate the last morsels of our carefully budgeted food and, on arriving at South Lake, met the first people we had seen in fourteen days.

## SKIING AND CLIMBING IN THE HEADWATERS OF BISHOP CREEK

BY NORMAN CLYDE



DURING the past several winters and springs I have done a good deal of skiing and climbing in the headwaters of Bishop Creek. The extensive area occupied by this amphitheatre, the abundance of northern and northeasterly exposure, together with a number of long gentle slopes, render this region one of the most desirable for skiing to be found east of the crest of the southern portion of the Sierra Nevada. As yet, however, I presume that I am the only person who has traversed any considerable portion of this magnificent mountain amphitheatre on skis. High spurs running out from the main crest divide it into three principal basins, in which the South, Middle and North forks of Bishop Creek have their source.

As a base for winter skiing in the South Fork, I have usually set out from Parcher's Camp which is at an elevation of slightly over 9000 feet. In the immediate vicinity of this camp there is excellent skiing, continuing some seasons well into May. Easily accessible are the slopes southeast of the South Lake caretaker's cabin. Due to the northerly exposure they are usually covered with "telemark snow" during the greater part of winter. The inclination, however, is steep and in great part covered with pines, so that the skier who runs it should have at least sufficient control to enable him to dodge trees consistently. Several miles northward along the trail leading to Bishop Pass is an undulating area more sparsely covered with pines, where there are many short, steep, north-facing slopes. On these the snow generally remains in powder form most of the winter.

To Bishop Pass and return, from Parcher's Camp, is an excellent day's run for skiers of at least fair proficiency and good endurance. The condition of the snow varies considerably along the course. On only one of a half dozen trips I have made was it in ideal condition along the entire route, and that was immediately following a storm in which there had not been much wind. Usually, especially above timberline, due to the high winds which

as a rule accompany winter storms in the Sierra at these altitudes, a good deal of windboard is likely to be encountered.

From the same base, during winter, I have occasionally climbed peaks on the headwaters of the South Fork by skiing far up their slopes and continuing the rest of the ascent in nailed boots, always taking along a short ice ax. In this way I have gone to the top of Hurd Peak several times and have also ascended two peaks of the Inconsolable Range.

Most of my ski-climbing trips, however, have been made in spring. After the first of April I use skis only five or six feet in length. The snow at high elevations in the Sierra during April and May is usually frozen hard in the early hours of the day, so I lash the skis in an upright position to a pack-board and climb in boots with tricouni edgenails. In this way I climb nearly—sometimes all the way—to the main crest. Leaving skis and skiing paraphernalia cached on the snow, I then climb a peak or two, so that by the time I return to my skis the snow is usually thawed enough to give me good control of the skis. During at least one season, I have ridden the skis from far up in a cirque almost continuously down to Parcher's Camp as late as May. Although one cannot travel so fast on a "straightaway" with skis of such short length as with those of standard length, nevertheless, the facility with which stemming and Christiania turns can be made on steep slopes is likely to surprise one who has used only the longer ones. With the short skis a fairly expert skier can link down chutes that only a very good skier could descend with longer ones. By using this equipment I have climbed most of the peaks about the headwaters of the South Fork, sometimes using Parcher's Camp as a base, at others, especially in late spring, by making a "high" camp. The Treasure Lakes, lying at an elevation of about 10,500 feet along the western base of Hurd Peak, are excellent for this purpose, since a half dozen cirques, and the peaks above them, can be reached conveniently by following the canyons that radiate upward from these lakes.

On the headwaters of the Middle Fork lie two basins separated by a dividing ridge. The more easterly of these should afford good skiing; the more westerly, an undulating area several miles in diameter, does, as I know from experience. To reach either, it is necessary to make one's way up over steep slopes for fifteen

hundred feet. The easterly basin can be entered by following the general course of the trail that leads up to the Blue Lakes. My acquaintance with this, however, is limited to a traverse from the upper South Fork over Table Mountain and down to Lake Sabrina, the chief recollection of which is of miles of unusually steep inclines covered with hard, smooth windboard. These conditions, however, may have been exceptional. The precipitous slopes directly below the Blue Lakes should ordinarily be covered with powder-snow almost throughout the winter.

The western basin offers better skiing possibilities. During winter the skiing in it should be superb over the undulating floor, which is several miles in diameter. I have found it excellent even at the middle of May. Probably the best way of reaching this basin is to ascend about 800 feet directly upward and westward from Lake Sabrina and then contour southward. In about half a mile will be found several canyons converging in a larger one. As to which is best to ascend, there is not much choice. Each grows steeper as one advances. After a rather hard final pull, however, one will have the satisfaction of emerging on the margin of the high basin around which rise Darwin, Haeckel, Thompson, and other lofty peaks.

On a number of occasions, after the first canyon, I have continued veering to the left, across and up several other canyons until I gained an altitude of about 10,500 feet. On the return I have enjoyed varied and wild rides, for the most part down over powder snow. On reaching the main canyon, I have generally gone directly down it instead of crossing it. In many places, however, it is steep and there are usually plenty of trees about which the skier can very readily wrap himself. Moreover, about midway down there is a hundred-foot drop running across the canyon, and if the skier does not observe this in time, he is likely to need a parachute and not have one. Fortunately, however, there is a way around the eastern end of this barrier.

Once, about the middle of May, I pitched camp on a lake near the northern margin of this basin, from which I made ascents of Mount Haeckel and several other peaks along the main crest of the Sierra. After descending from the upper cirque over the usual tread and step formation, an alternation of moderate incline and steep drop, unless I had tarried until the evening shadows had

frozen its surface, I usually found several miles of excellent spring "corn" snow.

The basin of the North Fork is more limited in extent and I am less familiar with it. However, I have found ideal powder-snow in the undulating area lying between North Lake toward Grass Lake and Lamarck Lake, to the southwest. Along this lower portion of the trail to Piute Pass there are a number of rather dense aspen groves and thickets, which the skier is not likely to bless. Farther up, on north and northeasterly slopes, sun crust appears to form rather readily. Following a storm, however, unless accompanied by too much wind, conditions should be excellent. Once, after a skiing-climbing trip to the Humphreys Basin in early June, I rode my six-foot skis for a considerable distance below the pass.

Both the upper Middle Fork and the North Fork have the advantage of being accessible from the Cardinal Gold Mine, at an elevation of 8500 feet, up to which, except temporarily in the case of unusually heavy storms, the road up the canyon from El Camino Real of Owens Valley is kept open throughout the winter.

## BEYOND THE SKIWAYS

BY DAVID R. BROWER



BEFORE skiing had made its relentless surge toward universal popularity, there were still persons to whom the inherent beauty in snowclad hills was in itself sufficient cause for winter mountain trips. Skiing was the most practical means of reaching snow country, where men could pause amid the majestic winter scene to contemplate their sublime surroundings. This was the golden age of skiing. It passed when bindings were mechanized with rigid toe-irons and severe tensions. For with mechanization came a mania for speed. Steeper and steeper slopes were sought. Caution was cast aside. Mountains became mere proving grounds for exhibitions of tricks and technique. Men worshipped perfection in tempo, vorlage; were consecrated to mastery of controls and schusses, corridors and flushes; talked of waxes and edges, ski-meets and records. They admired their apparel, while the peaks went unnoticed. They slashed trails in the forests, built elaborate lodges, gashed mountains with highways, wired peaks with funiculars. They conquered the wilderness. Men now ski superbly. But what have they lost?



This is the attitude of the extremist. Although it may be a synopsis of a trend, few persons will maintain that it is entirely correct. Most of those concerned, however, are not so fearful of the complete ascendancy of ski-racing psychology. Its very nature requires the compensating values of ski-touring or ski-mountaineering. Ski-racing is a product of practice slopes; and everyone becomes aware, once in a while, of certain basic truths pertaining to practice slopes: (a) quest of the perfect christy is futile; (b) filling other persons' sitzmarks is monotonous; (c) it is less fun to fall on packed snow than on powder; (d) it is frightening when skis go too fast; (e) it is terrifying to be mistaken for a slalom gate, with racers tearing by so close their poles don't clear. Conditions (a) to (e) may be endured most of the season. One may even enjoy them in a way. But now and then it's essential to have a change—to strike off on a ski-tour, or better still, to try ski-mountaineering.

"Ski-mountaineering" is a cumbersome term, but no other term so aptly describes the grand sport that results when skiing and mountaineering are combined. The ski-mountaineer's recipe, complex but not exacting, is this: find out how to handle skis reasonably well, gather winter equipment together, learn how to use it, find some trusted friends to carry most of it, then try to beard Old Man Winter in his den—out beyond the skiways. Out there one will find the timberline country, where temperatures are more invigorating, where snows are persistently drier and more powdery, where broad open slopes are tracked only by one's chosen friends, surroundings are rugged, yet marvelously adapted to ski-mountaineering. In such terrain even the most blasé of resort-skiers have been temporarily overcome with reverence. They have learned that the Christy is more than a matter of accurately synchronizing the advance of the inside ski and the outside shoulder; it is a symbol of ski-control that broadens winter horizons.

Perhaps a few tales of recent winter exploits will suggest how ski-mountaineering, with proper preparation, is really an inimitable way to enjoy the Sierra snows.

#### MOUNT LYELL

Mount Lyell, highest peak in Yosemite National Park, has been climbed without great difficulty during summer months by hundreds of persons; but until March, 1936, the peak had remained inviolate in winter. Three attempts had failed. In 1934 a party was driven to retreat by a blizzard, after having reached a 12,400-foot pass at the headwaters of the Maclure Fork of the Merced. A year later an attempt was stopped short of this point by a sub-zero, fair-weather blizzard of wind-whipped powder snow. A third attempt was made in January, 1936, but again the weather guarded the peak with nine successive days of storm.

February 29, 1936, at Happy Isles, in Yosemite Valley, Bestor Robinson, Lewis F. Clark, Boynton S. Kaiser, Einar Nilsson, and I started the fourth attempt. With fifty-pound packs, containing sleeping bags, tents, rope, ice-axes, emergency equipment, food and clothing, we followed the course of the Merced Canyon trail to Merced Lake Ranger Station. The next night, in a rising wind, a high camp was established at "Hell Hole"—nearly 2000 feet

above Bernice Lake and timberline. Camping on snow, we again discovered, had pleasures all its own.

By the time sleeping bags, knapsacks, and men had been piled inside the two tiny tents the congestion was quite cozy. Sole evidence of the wind outside was the powder that sifted through every available aperture, to the syncopated accompaniment of flapping tent fabric. Having snow inside was an advantage, since it was no longer necessary to reach outside to get it for melting over our Primus stoves. Bestor, Lewis, and Bunco prepared the soup on their stove. Einar and I improvised an entrée of chocolate, cheese, and oatmeal—Bestor had left the macaroni at Merced Lake. With everything ready, dinner was served: a momentary lull in the gale was awaited, tent flaps were un-zipped, victuals passed frantically so that we could re-zipp before the next snow laden gust. The wind usually won.

By morning the wind had developed into a hurricane. Our next game, upon leaving camp, was to see who could stand up longest. On one occasion Lewis was upset by an errant gust, although he had braced against it with ski poles. Long snow-banners were torn from ridges and peaks to be flung far to leeward, and to avoid following suit while crossing the first spur of Mount Maclure, we dismounted and crawled, digging in hands and toes for anchorage. Bestor had forecast summit weather in which it would be possible to hold up a match and watch it burn!

Four hours later we were on the summit of Mount Lyell, with Bestor doing just that. We had left the wind far below the Lyell Glacier bergschrund, and in comparative comfort our rope of five had followed Bunco's lead up the final 65-degree pitch of snow and rock. As we settled down for a summit siesta the Sierra Nevada, from the Tuolumne to the Kaweahs, was revealed. We could now understand why Spanish explorers had called this "One Great Snowy Range of Mountains." The entire range had an Alpine aspect that we had never fully appreciated in forest-belt ski country. Even after the 7000-foot descent in afternoon and moonlight to the ranger station, and the next day's 19-mile journey to Yosemite Valley we were still thinking of that view—of those incomparable north slopes, powder that lasts for months, square miles without a tree, the High Sierra above timberline — winter paradise, ear-marked for the ski-mountaineer.

## MOUNT CLARK

With Mount Lyell climbed, the next year found Kenneth Adam, Kenneth Davis (the Rock Climbing Section is overrun with Kenneths), Hervey Voge, and me looking for a new objective; accordingly, we left our snow camp on the Starr King plateau February 21, headed for Mount Clark. Crossing the confusion of canyons in the Illilouette basin took more time than we had anticipated, and it was quite late when we left our skis at 11,000 feet to traverse the steep snow-slope east of the summit with rope and ice axe. While waiting for Hervey to kick steps in the wind-packed powder we contemplated the schuss into a tiny lake 1000 feet directly beneath, and were relieved not to be on skis at the moment. We climbed too soon to the southeast arête, a mistake that King and Gardiner seem to have made during their dramatic first ascent in 1866. So we returned to the snow slope, and traversed over snow-covered ledges to the right. A short vertical chimney, a bit of scrambling, and we were on top.

The sun was setting, and our anxiety to return to our skis before dark prevented giving due attention to the alpenglow along the Sierran Crest. But perhaps nothing was lost, since to have remained would have meant losing a finer experience. We just returned to our skis in time to whip down through a scrubby timberline "slalom" and out upon a broad open space before the western glory had faded. For luxurious minutes our skis carried us effortlessly towards the fiery western sky. The smarting of cold wind on faces, the mad rush of air past tingling ears, the now somber peaks shooting skyward, the transition to amber and then to silver as the full moon rose and cast our racing shadows before us on the snows—these of the many sensations that whirled through our minds during that memorable descent will live longest. Details of the remaining trip back through the moonlight—shadows we thought were holes, holes we thought were shadows, the long traverse across the western cirque, the uncertainties of the route, the final arrival at our two forlorn tents, food, sleep—these are still chronologically stored in our minds. But minds have a limited capacity for chronological details. For each new detail we ask our minds to store, another is crowded out. Deep impressions are lodged more firmly. They are not easily loosened to be taken out

and described. That is why accounts of ski descents never reflect satisfactorily the inward experiences of the skier.

#### MOUNT STARR KING

In summer, the ascent of the dome of Starr King by either of the two usual routes is a pleasant climax to a half day's travel on and off trails—provided one knows rope-technique moderately well. In winter, the north route, covered deep with snow, while doubtless easy enough, is, nevertheless, full of hidden dangers. Consequently, Joe Specht and I chose the south route, drove to Mono Meadow, skied down into Illilouette Creek, then, by climbing 2500 feet, arrived on the southeast saddle of Starr King. Here a long-threatening sky greeted us with a flurry of snow. We would have to change to tennis shoes for the final friction climb, and while tennis shoes are not uncomfortable in a snow storm, the low coefficient of friction is decidedly so. We had already waited for several sunny days to clear the south face of previously fallen snow. So prospects above were dismal. Below, the open slopes up which we had toiled looked most inviting. A few moments' run would return us to the creek before our morning tracks from Mono Meadow were obliterated. Starr King was after all a rock climb, not a ski-mountaineering objective. The ascent would be safe enough, but another time would be better. Having observed all this, we parked our skis and started up.

The cracks and the open chimneys relied upon for tensile and cross-pressure holds in summer climbs were filled with snow, and it was necessary to find an alternative, relying on friction alone upon rock much of which was wet as well as smooth. Arrival on the summit was more than a victory over snow and rock. I had met Joe Specht in August, 1935, through mutual interest in an ascent of Starr King. We had looked at the mountain almost daily. Now, at last, we had been able to synchronize our free time to make the ascent—March 9, 1937.

#### THE PALISADES

Driven farther afield than most early-season snow-seekers, Arthur Blake, Morgan Harris, and I arrived January 5, 1938, at Glacier Lodge, on Big Pine Creek. Joined by Norman Clyde, we carried

sixty-pound packs to 11,000 feet on the North Fork, where there was promise of good skiing in the deep powder-snow.

January 8, during an attempt on the North Palisade, Norman, Morgan, and I were stopped just above the bergschrund below the "U-notch." Temperature was the most troublesome difficulty, for we were in sunshine less than half an hour. Air temperature was estimated as close to zero. At the bergschrund it was necessary to change from ski-boots to frozen climbing-boots. We soon concluded, therefore, that to continue might mean frozen feet, as well as a long descent after dark. So, we retreated, with the situation thoroughly rationalized, and enjoyed the matchless slopes of smooth dry powder that blanketed the Palisade Glacier. A safe winter ascent from the glacier will probably require a milder temperature, full knowledge of avalanche hazards on steep faces and couloirs, complete snow- and rock-climbing equipment, including roomy, tricouni-nailed ski-boots.

Mount Winchell was climbed two days later in a partial spirit of retaliation for the repulse. Norman, Morgan, and I took skis to 12,900 feet, and continued with tricounis, rope, and ice axes up the east ridge. The entire upper arête was well exposed to sun, and was quite clear. It was also fully exposed to wind, which seemed inordinately cold throughout the climb. Confirmation of the temperature came at the summit, where we noticed that water poured into a tin cup had either to be drunk at once or chipped out with a pocket-knife. But, even with such a cold reception, we could enjoy the cloudless sky, the snowy expanse of peaks from Whitney to Ritter, the contrast of snowless ranges toward coast and desert.

A leisurely descent, part of which was roped, brought us to our skis. During moments of the run back to camp, when we were not fighting breakable crust or lowering skis with rope and ice axe—that is, during those moments when we glided swiftly and almost noiselessly down perfect slopes of powder—we became aware of the great improvement skis are making in mountaineering. Not very long ago, the attainment of a summit was the climax of the climber's day. Now there are two climaxes. Hail to the schuss!

## CLIMBS IN THE CASCADES

By W. KENNETH DAVIS

LAST summer found Kenneth Adam, Raffi Bedayan, Neil Ruge, and me eager to investigate the splendid climbing possibilities of the Cascades of Washington. We approached the mountains by way of Lake Chelan—a beautiful lake that winds from the foothills, sixty miles into the heart of the mountains, where 8000-foot peaks rise 7000 feet straight out of its depths. Traveling by launch to the head of the lake, we hired an old car to take us up the eighteen miles of road to Bridge Creek and our base camp. We soon learned that we had chosen a poor year for mountaineering. Snow had been gone but a week from the valleys above Bridge Creek; several feet still lay on the passes. A prevailing hot spell encouraged mosquitoes to work in two shifts.

Although by far the best climbing is near the crest of the range, we decided to try some peaks to the east, where conditions were more favorable. Our first choice was Mount Liberty Bell, which appeared extremely difficult on all sides. Of all approaches the southwest ridge seemed most feasible. On July 20th, we attempted the climb, finding it far less difficult than expected, but the peak itself was spectacular. A rock dislodged near the summit plunged free for five seconds, and then did not appear on the snow field far below for another five!

Two mornings later all of us except Neil, whose leg was bothering him, started for Cut-throat Peak. Two thousand feet of climbing up a steep slope, swept clear of timber by winter avalanches, brought us to the first rocks, which we followed to the west ridge of the peak. Above us the ridge overhung. The alternative was a precipitous gully south of the ridge, which was exposed to all of the debris that might fall from the great cliffs above. After a heated debate as to which, if any, route we should take, we started up the gully for a short distance, then climbed back to the ridge over small, sloping, scree-covered ledges, following this dizzy pathway to its junction with the head of the gully. Turning the next fifty-foot slab by a ledge which overhung the north face, we came upon a cairn left by Hermann Ulrichs and a companion

during a previous attempt. The summit, practically one solid block of granite, rose sheer 300 feet above us. The sun was sinking low, as were our prospects of climbing this imposing block, but we decided to climb until six o'clock before turning back. After looking at numerous possibilities, all poor, we traversed out above the southwest face on a ledge a foot wide. Next came a narrow chimney, overhanging the face and topped by a difficult chockstone. The final pitch was a series of fingernail holds. We arrived on top about 6:30, left a register, took a quick look at the beautiful vista of snowclad peaks and dark valleys, then roped down. Suitable points from which to rope down were few; in one instance, when a sling nearly slipped off, we used a piton. We roped down the gully finding it easier than expected; and, as the sun set, we ran down steep grassy slopes to the trail 2000 feet below. Back in camp Neil had dinner waiting.

We had hoped that conditions on the crest would now be better, but trail crews and fishermen disappointed us with tales of mosquitoes and snow. So we looked about for some mountain near at hand. Mount Goode (9300 ft.) was the logical choice. Sixth highest in Washington, this mountain had been climbed but once, notwithstanding a dozen attempts before and after the successful ascent led by Wolf Bauer of the Seattle Mountaineers. So we gathered together all of our pitons, ropes, and other rock climbing equipment. Although the summit of Mount Goode was but three miles distant, it rose 7200 feet above camp. We thought it best not to attempt the ascent in one day, so left Bridge Creek in the late afternoon of July 26. We climbed incredibly steep forest-slopes to timberline at 6500 feet, and slipped into our two-pound sleeping bags to view the mountain scene. Opposite us, Booker Mountain rose 6000 feet above the valley floor. Toward the crest great pinnacles of granite jutted through the fields of ice turned blood-red by the setting sun. Waterfalls leapt from the cliffs above us, and streams dashed through meadows to the valley far below.

At five o'clock next morning we started up the mountain. We noticed a mountain goat on a shoulder above us. For several hundred feet we climbed in the bottom of a couloir that splits the south end of the mountain, the angle increasing as we went. The main peak rose to our north, the wall overhanging to a terrifying

height. To attain a notch in the arête ahead looked difficult at best. Holding a conference, we changed to tennis shoes, roped, and traversed back to the ridge north of the couloir along a narrow, exposed ledge and emerged onto a shelf which appeared to lead to the west arête. Part of the shelf, unfortunately, was missing, and we were forced to rope down a hundred-foot overhang. Moderately difficult climbing then brought us up to the point on the arête we desired to reach. Just why we had wanted to reach this point was not immediately apparent, for above us the arête overhung. Looking for some way to climb the wall above us, we traversed back on a tiny ledge and finally started up a small chimney. The first part, a narrow crack, was fairly easy; but above this was a more difficult crack; then a large, holdless chockstone. We stood puffing and blowing when we reached the top. Progress now seemed almost impossible. To our right the wall was one terrific overhang as far as we could see. Ahead, the crack became more and more difficult, finally ending in smooth slabs. The most broken of all possible routes was a large, overhanging nose, hundreds of feet above the couloir. A piton was put in for safety (it was none too sound), and on small, sloping holds we climbed a hundred feet of sheer wall to a platform. The worst was over. We were soon on the summit.

We spent quite a bit of time enjoying the view—the head of Lake Chelan, 8200 feet beneath us, the giant pinnacles toward the crest that gleamed in the sun, Mount Baker and Glacier Peak, which seemed so close. Finally we left the summit, roped down overhangs, and continued through meadow and forest to our camp. We had been victorious, but we retained a healthy respect for the Cascades.

Neil's leg having somewhat recovered, he and Raffi decided to try some peaks on the crest. They left late one afternoon, but were back early the next morning. They had been stopped by the heavy brush of Flat Creek Valley. Their return coincided with the first rain of the trip; so, with the probable advent of more bad weather, we left for Mount Rainier, where the weather turned out to be worse. So ended our Cascade climbs.

Peaks of the Cascades are much more difficult than those of the Sierra, due to tremendous relief and to problems of climbing and of accessibility. August and September are best for climbing.

A great amount of bush-whacking may be avoided by keeping to ridges instead of following river valleys. It is difficult to wander from place to place, since to travel between valleys usually means a 5000-foot climb and descent. Insects are reported to be not usually as bad as we experienced; rain, especially on the eastern side, is not as frequent as commonly thought. Determined mountaineers will find that the many new climbs to be made in the Cascades—some of them the best in the country—are well worth the extra effort.

## PROLEGOMENA TO A PHILOSOPHY OF MOUNTAINEERING

BY ELMO A. ROBINSON



OCCASIONALLY on a Sunday afternoon members of the Sierra Club, arriving at an intersection of trail and highway, speculate concerning the thoughts of the autoists dashing by. "What do they think of us?" we ask ourselves. "Are they also speculating about us and wondering how we have become the queer-looking folk we seem to be?" If they really do have such thoughts, they are at the beginning of a fascinating inquiry. How *did* we get this way? Why is it that we camp and hike and ski and climb cliffs and scale peaks? Until the last two hundred years such things simply were not done. What brought about the change? What is its significance? "The most important aspect of all culture," says Powys, "is the gathering together of the integral self into some habitual way of response to Nature. . . . No refining of one's taste in matters of art or literature, no sharpening of one's powers of insight in matters of science or psychology, can ever take the place of one's sensitiveness to the life of the earth."<sup>1</sup>

Among the peoples we are accustomed to call "the Ancients" there were apparently no activities resembling those of the modern hiking or mountaineering club. Appreciation of nature was not entirely lacking, but it seems to have been directed towards the more familiar and livable aspects. Remote, strange, forbidding regions—if one may judge from the records—were avoided. The Hebrew poetic and prophetic literature contains many allusions to objects of natural beauty. Isaiah has been called a nature-lover, and Jesus has immortalized the lilies of the field. But there is no indication in the gospels that "Nazareth is set on a hill overlooking one of the fairest mountain prospects in all Judea."<sup>2</sup> And as for mountains, they are spoken of either merely as backgrounds or as the scenes of unusual events—the transfiguration, the temptation, the strange adventures of an Elijah, the revelation to Moses, the grounding of the Ark. Hebrew appreciation of nature was,

<sup>1</sup> John Cowper Powys. *The Meaning of Culture*, pp. 147, 148.

<sup>2</sup> Arnold Lunn. *The Exploration of the Alps*, p. 10.

rather, a love of the pastoral. Eyes might be lifted to the hills, praises be sung to the cedars of Lebanon, but bodies and voices remained in more comfortable and conventional locations.

Among the Romans country life was prized and travel was common—for purposes of sightseeing, change of climate, edification, and relaxation. Interest in the past led men to visit temples, for these often served as historical museums. Interest in art was also a motive for travel, but an even stronger one was interest in nature. The Roman appreciation of nature, however, was more limited than ours. Objects in nature which were famous (like our Niagara Falls), or rare (like Point Lobos), or regarded as sacred (like Plymouth Rock), were the usual destinations. Valleys, low hills, and coastlands were charming; grottos and sources of streams were particularly enjoyed; but there was no admiration for the wild or savage or for the majestic or sombre.

In fact, there were those who emphatically denied any beauty to mountains. "Horrible rock" is a characteristic phrase. Blind to the majesty of the Alps, the Roman soldiers and traders who crossed them had "no eyes save for the difficulties of the narrow mule-paths, the wilderness of ice and snow, and the horror of the avalanche."<sup>3</sup> Cæsar occupied one of his crossings by working away on his treatise on the Latin language. By the beginning of the Christian era several passes were well known, but the few disparaging references extant reflect the popular abhorrence of mountains as repulsive and dangerous, the home of wild beasts and wilder men. A pass was merely an occasion for making, in return for safety, a votive offering of thanks to some god.

Our word *altitude* covers all elevations from Death Valley to Whitney; similarly the Latin *mons* can be anything from a sand-hill to an Olympus. Ascents of actual mountains by Romans were apparently rare. Mount Etna, an exception, was visited chiefly for "scientific purposes," or perhaps to see the sun rise; the records usually omit any reference to the view or the beauty. Occasionally one finds claims that genuine enthusiasm for mountain scenery is to be discovered among Roman writers, but the usual report of scholars is to the contrary.<sup>4</sup>

<sup>3</sup> Ludwig Friedländer. *Roman Life and Manners*, p. 392.

<sup>4</sup> Friedländer, *op. cit.*, pp. 323, ff. Also: Archibald Geikie. *The Love of Nature Among the Romans*, chapter 13.

After the breakdown of the Roman administrative system and on into medieval times, the poor condition of the unrepaired trails, the uncertainty about inns, the likelihood of meeting brigands, combined to reduce transalpine travel to a minimum. Pilgrims on their way to Rome for Easter had to brave the passes at the worst season of the year when the danger from avalanches was at its maximum.<sup>5</sup> Records speak of the horrors of the journey, the glare of the sun, the chill of the air.<sup>6</sup> We are accustomed to associate indifference to *all* the beauties of nature with medieval religiosity and other worldliness, but this is doubtless an error. Among the early Christians there had been some appreciation of nature. Rather early in the development of the church, St. Basil struck a modern note when, in his description of the retreat which he had selected for the period of his readjustment from the life of a "college professor" to that of an ecclesiastical administrator, he wrote:

There is a high mountain, covered with a thick forest, watered on its northerly side by cool and transparent streams. At its base is outstretched an evenly sloping plain, ever enriched by the moisture from the mountain. A forest of many-coloured and multifarious trees, a spontaneous growth surrounding the plain, acts almost as a hedge to inclose it. . . . For it is, in fact, by no means far from being an island, since it is shut in on all sides by barriers. Two ravines break off abruptly on two sides, and on a third side, at the bottom of the cliff, the river which glides gently by forms a wall, being itself a continuous and impassable barrier. . . . The mountain stretches along the fourth side. . . . Adjoining my land is another neck of land, as it were, which supports at its summit a lofty ridge, so that from the former the plain below lies outspread before the eyes, and from the elevation we may gaze upon the encircling river. . . . roughened by the rock which borders upon it. As the river recoils from this rock, it coils itself into a deep whirlpool, furnishing me, and every spectator, with a most pleasing sight. . . . The highest praise, however, which I can give for this place is that. . . . it attracts not even a wayfarer, except the guests who join me in hunting.<sup>7</sup>

In the Middle Ages monasteries were established in inaccessible regions of the Alps and other mountain systems, largely as retreats from the turmoil of the world, but perhaps with some degree of

<sup>5</sup> Douglas W. Freshfield. *The Life of Horace Benedict de Saussure*, p. 4.

<sup>6</sup> Friedländer, *op. cit.*, p. 395.

<sup>7</sup> R. J. Deferrari. *St. Basil—The Letters*, letter 14, vol. i, pp. 107-111.

appreciation for nature.<sup>8</sup> Gautier de Coinci, a monk of the thirteenth century, shows his sensitiveness to beauty when he says:

Therefore will I do even as he does who seeks flowers in a meadow the which is all springlike and bedecked with flowers and who sees all round him so many divers ones, crimson and violet and yellow and dark blue, that he knows not the which to pluck first.<sup>9</sup>

Theoretical discussions were not lacking, for at least two of the great philosophers of the Church, John Scotis Erigena and Thomas Aquinas, had something to say about the significance of beauty. There were differences of opinion, but one widely accepted view held that those objects are beautiful which symbolize God's glory and power and goodness.<sup>10</sup>

But in all this there was nothing of mountain climbing. What was advocated is comparable to advice to walk in Golden Gate Park or perhaps through the orchards of Santa Clara Valley. Except for a record of six priests who were punished for an attempted ascent in 1307, Petrarch (1335) stands out as the only known individual of this period who climbed a mountain from motives comparable to ours, and he was apparently the first to record his "deep and grave reflections." Cherishing the idea for some years, he finally began the ascent of Mount Ventoux, accompanied by his brother. On their way they fell in with a shepherd who had preceded them fifty years earlier; no one had attempted it in the meantime. Impressed with what he saw on the upward journey and at the summit, Petrarch was inclined to moralize about it all. And when, opening a book which he had brought along, his eye fell by chance upon a passage written by Augustine a thousand years earlier, his attention was turned inward upon himself to the exclusion of the wonders about him. For the passage read:

There are men who go to admire the high places of mountains, the great waves of the sea, the wide currents of rivers, the circuit of the ocean, and the orbits of the stars—and who neglect themselves.<sup>11</sup>

With the Renaissance there came a new love for nature, or at least a new freedom to express in literary form that love which had

<sup>8</sup> Bernard Bosanquet. *History of Aesthetics*, chapter 6.

<sup>9</sup> Quoted by Bede Jarret, in *Social Theories of the Middle Ages*.

<sup>10</sup> Bernard Bosanquet. *History of Aesthetics*.

<sup>11</sup> Francis Gribble. *The Early Mountaineers*, p. 23.

perhaps never been absent from medieval life. Especially is it noteworthy that writers upon education now began to assert that growing boys should be taken upon nature trips. Vegio recommended that schoolboys should walk by streams, woods, and seashore, engaging in fishing, bird-catching, and teaching birds to talk.<sup>12</sup> Bromyard wrote, "It were better, therefore, to take boys and girls, servants and maids, to church or to the fields rather than to games and taverns. But young folk should not be let to wander without good companions. Even to be shut up at home were better than that."<sup>13</sup> And Vives, one of the greatest of Italian humanist educators, sentimentalized thus:

Let us go on the green walk, and not take our walk as if in a rush, but slowly and gently. . . . There is no sense which has not a lordly enjoyment! First, the eyes! What varied colors, what clothing of the earth and trees! What tapestry! What paintings are comparable with this view? . . . Then the ear. How delightful to hear the singing of birds, and especially the nightingale. Listen to her as she sings in the thicket. . . . Added to this there is a sweet scent breathing from every side, from the meadows and from the trees, even from the fallow land and the neglected fields! Whatsoever you lift to your mouth has its relish, as even from the air itself, like the earliest and softest honey.<sup>14</sup>

But even the humanist was likely to be blind to mountain scenery. Erasmus crossed the Alps in 1506 when he was about forty years old. It has been remarked that: "Although the journey was made through some of the grandest and most stupendous of Nature's wonders, there is not one word in any of the great man's letters to show that he was even conscious of their presence, and, though he was engaged in writing during the whole period, he could find nothing better to write about than his approaching old age, of which he had been reminded by discovering some gray hairs on his temples."<sup>15</sup>

Humanistic interest in man, and his affairs in this world, found almost simultaneous expressions in many fields. Artists began to discover new subjects and techniques of painting, writers became

<sup>12</sup> Jarrett, *op. cit.*, p. 64.

<sup>13</sup> Quoted by Jarrett, *op. cit.*

<sup>14</sup> Quoted by Watson Foster, in *Aberystwyth Studies*, X, p. 83.

<sup>15</sup> Quoted from J. J. Mangan by Albert R. Chandler, in *Beauty and Human Nature*, p. 365.

conscious of the beauties of native tongues, classicists turned back to forgotten periods of man's achievements, scientists looked out at nature with new eyes, astronomers found new worlds, and navigators began to explore this one. The year 1492, famous in American history, is also the date of the first full and precise account of a mountain expedition. Under orders from the King of France, several persons led by Domp Julien de Beaupré made a climb of Mount Aiguille, involving a stay of one week in the high elevations. Some of the party were terrified by their "horrible and frightful passage," since, in addition to the unknown physical dangers, there was the additional fact that by climbing they were tempting God to become very angry with them. De Beaupré himself was of a different mind, for to him the horrors were more than compensated for by the beautiful meadows and the herds of chamois.<sup>16</sup>

During the next fifty years portions of the Alps became familiar to Swiss town-dwellers, particularly scholars, although true mountain ascents were rare. Indeed, if a man climbed one mountain, that was sufficient for a lifetime. Conrad Gesner was the first to profess boldly a love of climbing for its own sake. In 1543, at the age of twenty-seven, he wrote:

I have determined for the future, so long as the life divinely granted to me shall continue, each year to ascend a few mountains, or at least one, when the vegetation is flourishing, partly for the sake of becoming acquainted with the latter, partly for the sake of suitable bodily exercise and the delight of the spirit. For how great the pleasure, how great think you, are the joys of the spirit, touched as is fit it should be, in wondering at the mighty mass of mountains while gazing upon their immensity and, as it were, in lifting one's head among the clouds. In some way or other the mind is overturned by their dizzying height and is caught up in contemplation of the Supreme Architect.<sup>17</sup>

One obstacle to mountain expeditions was superstition. For example, the legend in one locality asserted that Pilate dwelt in a certain mountain lake, ready to attack any who might disturb him. Just as we can accept for dramatic purposes the whimsical explanation of lightning and avalanche in Maxwell Anderson's

<sup>16</sup> Gribble, *op. cit.*, p. 30.

<sup>17</sup> Conrad Gesner. *On the Admiration of Mountains*. Trans. by H. B. D. Soulé (San Francisco, 1937), p. 5.

"High Tor," so our ancestors accepted literally and fearfully the idea that such phenomena were directed by the wicked Pilate against rash men penetrating his high Hades. Gesner and others found it necessary to combat such superstitions by argument and demonstration. And in 1934 we find the Russian government combatting similar superstitions held by the peasants of the Caucasus by a crusade of climbers on Mount Tetnuld.<sup>18</sup>

The first English party came to the Alps in 1563, and by the end of the century there were numerous resorts for the traveler, and numerous treatises available for the reader. But for a period of a hundred and fifty years little advance was made either in mountaineering itself or in attitudes toward the mountains. At the opening of the eighteenth century the mountain world was practically unknown to the cultured European.<sup>19</sup> Natural scenery was still generally regarded as hideous and gloomy; it could become attractive to the eye only by artificial landscaping. Pope and Addison were among those who attacked this view. At times the attack was rather weak, as when Addison wrote that the mountains "fill the mind with an agreeable horror."<sup>20</sup> But presumably an agreeable horror is a step in advance of a disagreeable one. The older views were undermined, also, by scientific expeditions, as well as by painters and poets. In 1702, Jacob Scheuchzer, who found climbing unpleasant, made the first of nine tours of investigation in the highlands of Switzerland. His publication, "Helveticus, sive Itinera Alpina Tria," was partially financed by Isaac Newton. In 1738 Albrecht von Haller published "Die Alpen," a volume of poems, which introduced the peaks of Switzerland into literature. By the last quarter of the century, around 1780 and 1790, one hundred accounts of Alpine journeys had been published; the Alps had become a European playground, it was now fashionable to climb, and John Moore had observed that mountaineers, as do American vacationists of today, like to boast of what they have done and seen.

Perhaps the most significant name in the story of the modern attitude toward nature is Jean Jacques Rousseau. "Back to nature" is the slogan usually associated with him. But he was confused

<sup>18</sup> Anna Louise Strong. "Anna Louise Strong Writes from Russia," in *Unity* (Chicago), Nov. 26, 1934, p. 127.

<sup>19</sup> Friedländer, *op. cit.*

<sup>20</sup> G. R. de Beer. *Early Travellers in the Alps.*

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in his concept of nature. Sometimes he pled for a return to a less artificial design for human education and human nature, sometimes for the superiority of country life over town life, sometimes for the beauties of natural scenery, sometimes for a romantic idealizing of the savage over the civilized. All of these were "nature" to Rousseau. Love of nature in our sense meant to him either love of wild scenery or the love of domesticity in the country.<sup>21</sup> In many respects the secret of his influence is difficult to understand. He made one walking trip into the mountains. He never made a second, nor visited a glacier, nor crossed a pass except from necessity.<sup>22</sup> Of "torrents, rocks, dark woods, mountains, rough paths, and frightful precipices," he wrote eloquently. But what he actually valued most highly was not the high country but the lower wooded regions.<sup>23</sup>

Rousseau's sociological novel, "*Julie ou la Nouvelle Héloïse*," has been pronounced the most popular and influential work of the eighteenth century. One of its most revolutionary features was the choice of a little town at the foot of the Alps as a setting for the story. Although it contains little local color and its few descriptions of scenery are somewhat unimaginative, nevertheless it was in great contrast to accepted literary standards, for "in no previous work of French fiction in the eighteenth century had there been more than a garden path or a weeping willow that anybody could remember."<sup>24</sup> This novel suggested that a writer might look at nature with his own eyes and write what he saw and felt, rather than imitate conventional forms and stereotyped attitudes. What he has to say about "local walks" will touch a responsive chord in hikers of today:

I can only think of one way of travelling pleasanter than travelling on horseback, and that is to travel on foot. You start at your own time, you stop when you will, you do as much or as little as you choose. You see the country, you turn off to right or left; you examine anything which interests you, you stop to admire every view. Do I see a stream, I wander by its banks; a leafy wood, I seek its shade; a cave, I enter it; a quarry, I study its geology. If I like a place I

<sup>21</sup> Preserved Smith. *A History of Modern Culture*, vol. II, pp. 384, 385.

<sup>22</sup> Freshfield, *op. cit.*, pp. 27, 28.

<sup>23</sup> H. Höfding. *Jean-Jacques Rousseau*, p. 29.

<sup>24</sup> Richard A. Rice. "Rousseau and the Poetry of Nature in 18th Century France," in *Smith College Studies in Modern Languages*, vol. VI, nos. 3 and 4, 1925, pp. 2, II.

stop there. As soon as I am weary of it I go on. I am independent of horses and postillions; I need not stick to regular routes or good roads; I go anywhere a man can go; I see all that a man can see; and as I am quite independent of everybody, I enjoy all the freedom a man can enjoy. . . .

What varied pleasures we enjoy in this delightful way of travelling, not to speak of increasing health and a cheerful spirit. I notice that those who ride in nice, well-padded carriages are always wrapped in thought, gloomy, fault-finding, or sick; while those who go on foot are always merry, light-hearted, and delighted with everything. How cheerful we are when we get near our lodging for the night! How savory is the course food! How we linger at table enjoying our rest! How soundly we sleep on a hard bed! If you only want to get to a place you may ride in a post-chaise; if you want to travel you must go on foot.<sup>25</sup>

Rousseau's enthusiasm for nature was caught up in Germany by Immanuel Kant, who was also influenced by the "agreeable-horror" theory of the English. Recognizing the fact that mountain scenery has a definite appeal to desirable emotions, but unable to go so far as to say that it is "beautiful," he described it as "sublime." By the sublime he meant that which, in comparison to all else, is great. Strictly speaking, no object of nature is sublime; the term describes a disposition of the mind. Nature seems sublime on those occasions when all resistance to nature's dominion is recognized as futile, and yet in spite of this recognition we are unafraid. The sublime challenges us to regard as small those things which nature is capable of taking away from us, and thus to regard its might as powerless:

Bold, overhanging, and as it were threatening, rocks; clouds piled up in the sky, moving with lightning flashes and thunder peals; volcanoes in all their violence of destruction; hurricanes with their track of devastation; the boundless ocean in a state of tumult; the lofty waterfall of a mighty river, and such like; these exhibit our faculty of resistance as insignificantly small in comparison with their might.<sup>26</sup>

Kant was a city-dweller. Probably he never saw a high mountain, much less a volcano, nor an awful chasm, nor even a lofty waterfall. And yet in some mysterious manner he caught and expressed the feelings which mountains often induce.

<sup>25</sup> J. J. Rousseau. *Emile* (Everyman Edition), pp. 312, 374, ff.

<sup>26</sup> Immanuel Kant. *Critique of Judgment*. Trans. by J. H. Bernard (2nd edition), p. 125; also p. 136.

But it was Rousseau, rather than Kant, who cut the pattern for subsequent generations and who determined that nature should be beautiful and not merely sublime. Rousseau's contribution has been concisely and sympathetically stated by another French philosopher:

The mountains may, since the beginning of time, have had the faculty of rousing in those who looked upon them certain feelings comparable with sensations, and indeed inseparable from mountains. But Rousseau created in connection with them a new and original emotion. This emotion has become current coin, Rousseau having put it into circulation. And even today it is Rousseau who makes us feel it, as much and more than the mountains. True, there are reasons why this emotion, sprung from the heart of Jean-Jacques, should fasten on to mountains rather than any other object; the elementary feelings, akin to sensations, which were directly aroused by the mountains must have been able to harmonize with the new emotion. But Rousseau gathered them together, gave them their places, henceforth as mere harmonics in a sound which he provided, by a true creation, the principal tone. It is the same with love of nature in general. Nature has ever aroused feelings which are almost sensations; people have always enjoyed the pleasant shade, the cool waters, etc., in fine all those things suggested in the word "amoenus" by which the Romans described the charm of the country. But a fresh emotion, surely the creation of some person or persons, has arisen and used these pre-existing notes as harmonics, and produced in this way something to be compared with the fresh tones of a new instrument, what we call in our respective countries the sentiment of nature.<sup>27</sup>

Those students of human nature, the psychologists, have endeavored to recognize, name, describe, and classify the motivations lying at the root of behavior. Pending their arrival at an agreement one is forced to choose among the various accounts submitted. One theory has it that there are four fundamental human wishes, and that all specific impulses can be classified as forms of one or more of these. The four are: (1) the wish for security, or the impulse to escape fear; (2) the wish for adventure, or the impulse to escape boredom; (3) the wish for response, or the impulse to escape loneliness; and, (4) the wish for recognition, or the impulse to escape oblivion.<sup>28</sup>

<sup>27</sup> Henri Bergson. *The Two Sources of Morality and Religion*, p. 33.

<sup>28</sup> Joseph K. Folsom. *Social Psychology*, p. 140.

Mountaineering, if the testimony of various witnesses is to be accepted, offers satisfaction to all four of these motivations. That this is true of the wishes for adventure and recognition, is obvious. As for recognition, the ascent of a difficult peak is the source of considerable prestige. Even without such an ascent the mere fact that one hikes about in the high country may be enough to insure the reputation of being a person of some ability and importance. And as for adventure, mountaineering and pack-trips certainly offer that, with varying degrees of emotional thrills. They afford an escape from routine which is perhaps saner than that attained by hunting or even fishing.<sup>29</sup>

But such expeditions also offer satisfaction of the desire for response in friendships, romances, and the sense of solidarity of the group. "It is a paradox," says Schuster, "that mountaineering, whose specific impulse is a Wordsworthian desire for solitude, should depend for half its exercise on comradeship. . . . There are solitary climbers. But the ordinary mountaineer is dependent upon his companion (sometimes in the most literal sense)."<sup>30</sup> I think it could be shown that even the solitary climber gets something of this sense of response. Mountain climbing, according to Spengler, is the most characteristic sport of our modern culture, for it expresses so clearly the fundamental urge of that culture, the impulse to be alone with the infinite.<sup>31</sup> But to be alone with the infinite implies that the infinite is personalized and through its majesty and beauty is speaking directly to the lonely climber and to him alone.

To claim that mountaineering, or even a vacation in the mountains, satisfies the wish for security and "the quest for certainty" may sound absurd to the confirmed citizen of the city streets. But the fact that this claim is not baseless, and the explanation of why it is not baseless, is clearly expressed by Bergson, even though he is writing of simple country walks rather than difficult ascents:

Man is the only animal whose actions are uncertain, who hesitates, gropes about and lays plans in the hope of success and the fear of failure. He is alone in realizing that he is subject to illness, alone in knowing that he must die. The

<sup>29</sup> Frederic Harrison. *My Alpine Jubilee*, p. 119.

<sup>30</sup> Claud Schuster. *Men, Women, and Mountains*, p. 56.

<sup>31</sup> Oswald Spengler. *The Decline of the West*.

rest of nature goes on its expanding course in absolute tranquillity. Although plants and animals are the sport of chance, they rely on the passing hour as they would on eternity. We drink in something of this unshakable confidence during a country walk, from which we return quieted and soothed.<sup>32</sup>

It is difficult to compress into a few words a statement of all the satisfactions and values of mountaineering. Perhaps this sentence does it about as well as it can be done:

The glorious heat of noonday, the majesty of the night, the marching stars, the wide vision, the suggestion of peril, the rhythmic movement of the body, the fellowship of toil, the attainment—all these together make some new and precious thing which lives in us and which will till thought and feeling die.<sup>33</sup>

To review the development of human attitudes and behaviors with respect to mountains is to assemble evidence that human nature can be changed, or at least that it has changed. This proposition must of necessity form a part of any philosophy based upon mountaineering. To say that human nature changes is not to claim that the fundamental wishes or needs which motivate behavior are altered; presumably they are not. Rather is it an assertion that the change is in the behavior itself, by which men seek to meet their needs. In seventeenth-century Europe to climb mountains for pleasure was not even thought of; it was contrary to human nature as then constituted. In twentieth-century Europe and America it is human nature to love mountains and mountaineering. The change which has come about suggests the possibility of modifying a great many other aspects of behavior which are now commonly regarded as fixed and unalterable characteristics of human nature.

Among the many possible directions in which human nature may change in the future is one in which is specifically implied by mountaineering. This is a diminishing evaluation of the profit motive. Critics of mountaineering often exclaim, "Well, I just can't see what anybody gets out of risking life and limb in that fashion!" Beneath such impulsive outbursts lie the common assumptions of our age, or at least of the age which is passing: that a man should do only what will bring him profit; that there

<sup>32</sup> Bergson, *op. cit.*, pp. 193, 194.

<sup>33</sup> Schuster, *op. cit.*, p. 138.

abideth three kinds of profit—political power, social prestige, and economic wealth; and that the greatest of these is wealth. There is no activity of man which is more directly opposed to such a philosophy than mountaineering. Our commercial civilization assumes that in the absence of the struggle for economic existence there can be no adequate urge to action, no sustained striving, no admirable achievement. Every man or woman who climbs for the love of it is proclaiming a denial of this point of view. Is there not significance in the fact that mountaineering never became a popular activity until after the industrial revolution and the rise of capitalism? Superficially this relationship might be thought to rest upon the improvements in transportation which have rendered the mountains accessible. But such an assumption hardly explains all of the changes of attitudes, especially the almost religious consecration to the task, which characterizes many climbers. Even in the conventional vacation camping trip, or even in the simple excursion to the hills for a day's outing, is there not manifest a desire to get away from the world of competitive struggle for wealth, a desire to erase the lines of social cleavage indicative of relative degrees of economic success, a desire for equality and fraternity? Certainly the genuine mountaineer constitutes vital testimony for the existence of powerful motivations upon which it is conceivable that the society of the future may place greater reliance.

Just as mountaineering constitutes a rebuttal of economic materialism, so does it constitute a refutation of metaphysical materialism—if such a refutation be any longer needed. For, although the interaction of units of matter, call them atoms or what you will, may explain some phenomena very clearly and usefully, it does not adequately and completely explain a universe in which there are men who scale peaks. Mountaineering is but one of the many evidences that human nature is (*in some sense*) superior to nature which is not human. It is indicative of the power of man's spirit to conquer the physical obstacles which threaten to inhibit an expansion of the life of the mind. It is not merely that a man is able to get his body to the summit of a mountain—which in itself is often no mean achievement. It is rather that, as Kant saw, he is able, perhaps without an ascent, perhaps by contemplation from the lake at the mountain's base, to understand that



Engraved Title-Page of Scheffer's "History of Lapland,"  
which contains a chapter on the use of skis



*De infelici pugna Regis Danorum Regneri.*



*Scriefinnia descriptio.*

ILLUSTRATIONS OF THE USE OF SKIS

From *Historia de gentibus septentrionalibus*, authore Olao Magno, in epitomen redacta, Antverpiæ, ex officina Christophori Plantini, M. D. LVIII



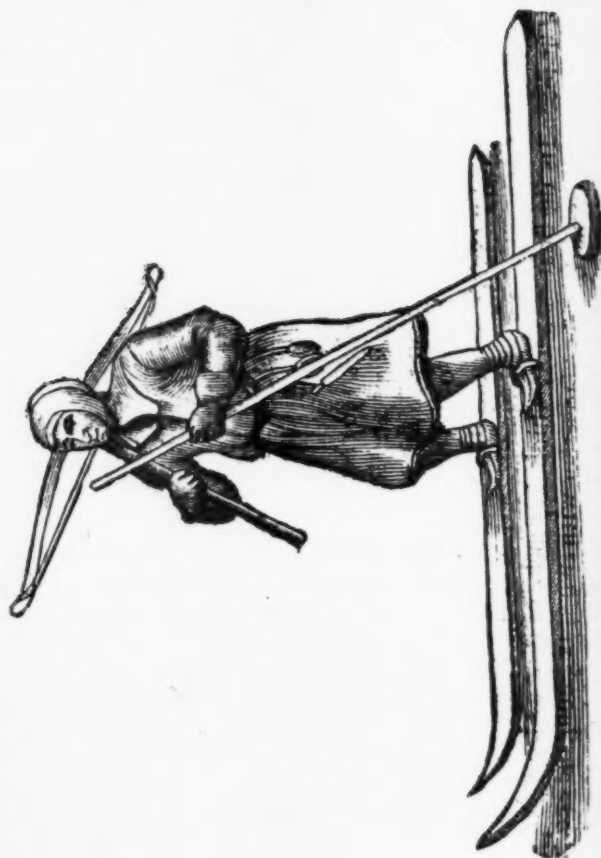
*De onagris seu alcibus, in ninosa glacie currentibus.*



*De baptizandis pueris sylvestrium incolarum.*

ILLUSTRATIONS OF THE USE OF SKIS

From "A History of the Northern Peoples," by Olaus Magnus, abridged edition, printed at Antwerp by Christopher Plantin, 1558



A LAPLANDER ON SKIS  
From "The History of Lapland," by John Scheffer, 1674



THE START OF A DAY'S SKIING NEAR NORTH PALISADE

By David R. Brower



THE PALISADES, FROM THE NORTH, JANUARY 1938  
By Arthur H. Blake



RETURNING FROM A CLIMB IN THE PALISADE REGION

By David R. Brower



NORTH PALISADE FROM MOUNT SILL

JUNE 1937

By Howard S. Gates

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his own spirit or personality, without being alien to physical nature, is in its awareness and sensitivity more real than the apparent soullessness and inertness of glacier and granite. Indeed he may come to feel, since he is not alien to the panorama before him, that glacier and granite are not alien to him, and that perhaps they share some of his psychic qualities. Pursuing his meditations he may eventually conclude that nature *as a whole* is (in some sense) superior to human nature, but that its superiority is with respect to those same psychic qualities which make him superior to nature's details. He may find himself with the faith that the universe as a whole is alive, conscious, and communicative. Thus one who philosophizes about mountaineering is likely to find himself at home among the panpsychists, accepting their interpretation of the cosmic variables.<sup>34</sup>

One other aspect of mountain philosophy is the recognition that the irregularities of the earth's surface offer unexpected testimony of beauty and friendliness. "The two most obvious characteristics of Nature. . . are loveliness and power. The beauty dawned later upon human intelligences than did its power."<sup>35</sup> To sleep on a high mountain-side a few centuries ago was to suffer the maximum torments of fear. Even Emerson of our own time, with all his love for nature, was too timid to spend a night in the open among the big trees, although his fears were "scientific" rather than "theological," fears of disease rather than of divinity. Parts of the earth's crust that were once regarded as at least uninteresting, or more probably as ugly, repelling, and inimical, are now looked upon as bits of marvellous beauty, inviting, and friendly. From horror to "agreeable horror," to agreeableness without horror, to fascinated delight—such has been our heritage of attitudes.

Something of this same development is occasionally recapitulated by the initiate Sierran, to whom the first days among the crests may seem terrifyingly overpowering, but in whom this depression is soon replaced by an unexpected yet welcome elation. What was once lonely and forbidding becomes a spot in which to curl up comfortably and confidently in one's blankets and lay oneself down to rest. The mountaineer has been one who, "passing through the Valley of Baca, maketh it a well." He has given the lie to

<sup>34</sup> Charles Hartshorne. *Beyond Humanism*.

<sup>35</sup> Alfred N. Whitehead. *Adventures of Ideas*, p. 12.

those who deny the evidence that the universe is in some respects friendly to man and man's aspirations. Any complete philosophy must incorporate these racial and individual experiences into its final description of the nature and meaning of the cosmos.

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### THE PLEASURES OF WALKS IN THE MOUNTAINS

Let us then conclude that from walks in the mountains undertaken in the company of friends the highest of all pleasures and the most charming of all delights of the senses are obtained, provided there be no hindrance in the weather, and none in either mind or body. For to a man who is sick or unsound of limb nothing of this sort can be welcome. So also if his mind be ill, if he have not laid aside anxieties and passions, in vain are the pleasures of body and senses sought for. But give me a man at least moderately endowed in mind and body, educated liberally, and not too much given to idleness and luxury or to lust; also I should wish him curious about natural objects and an admirer of them, so that even from the contemplation and admiration of the mighty works of the Supreme Architect and of the enormous variety of nature as it exhibits itself in the mountains, as though in a single vast pile, the delight of his spirit might be added to the harmonious delight of all his senses; what other sort of pleasure will you find, pray, at least within the bounds of nature, more honorable, more complete, and more perfect from every point of view?\*

\*From *A Description of Mons Fractus near Lucerne*, written by Conrad Gesner in 1555, and translated by H. D. B. Soulé in 1937.

## UNFORGETTABLE MEALS

BY VERNON BAILEY

*Retired Chief Field Naturalist of the U. S. Biological Survey*



IN a long and varied career, much of it out of doors, in camp, on foot and on horseback, with vigorous exercise and much mountain climbing, I have developed and maintained an excellent appetite. Moreover, at seventy-three I have a sound and almost unblemished set of teeth. The dentists comfort me with the information that some day I will die with a good set of teeth in my mouth. My ears and eyes are getting a little dull and my hair has lost most of its color, but my sense of taste, which has never been dulled by tobacco, alcohol, or other poisons, is as keen as ever. It is not strange that my meals have been a source of enjoyment, or that I have mastered some of the fine arts of camp cooking, or even delight in occasionally taking a hand in the kitchen at home.

In looking back over many years, a dozen or more meals stand out with such vivid freshness that they seem worth preserving in memory's halls. It will not be necessary to go back to my mother's cooking in pioneer days, although that is the real foundation of my own health and happiness.

Not to go back too far, I like to recall some roast antelope ribs that Dr. C. Hart Merriam and Basil Hicks Dutcher enjoyed with me in central Idaho in 1890 when away from our base camp on a three-day trip with only one day's rations. I brought the antelope in on my back toward evening of the second day when our bag of biscuits was low, and we all sat around the camp fire and roasted ribs until brown and tasty and then held them in both hands and gnawed off the meat with our incisors, just as cave men did many thousands of years ago. Dear old Dutcher is gone, but Dr. Merriam and I often speak of that meal.

On another trip, fourteen years later, in the Seven Devils Mountains of Idaho, Arthur H. Howell and I over-stayed our time and were on short rations. We had a little bacon, beans, and prunes left, but feared we would run out of food before we could get back to our base camp. Instead, however, we ran into a world of blue grouse up where no one ever hunted; and half a fried blue grouse

apiece, thick and juicy and delicious, with beans and biscuits and prunes, was quite different from starvation.

In 1897 Walter K. Fisher and J. Alden Loring were with me in camp up through eastern Oregon most of the summer, and, while we had good camp fare and excellent appetites, we were getting a bit tired of bacon and beans and biscuits. When we struck the Columbia just below The Dalles I went down to the nearest fish-wheel and picked out a six-pound young silver-side salmon, took it to camp, dressed it and cut it in cross sections an inch thick, dipped them in flour and fried them in bacon grease until done to a turn. We had good camp biscuits, fresh butter and applesauce to go with the fish. It makes my mouth water to think of that first meal of salmon, but we had many more.

Another fish dinner that I can never forget was down on the lower Pecos, just before it joins the Rio Grande, in west Texas.

I was examining some old beaver dams just above the Pecos High Bridge, when a boat came across the river and an old fellow said "howdy" in a friendly tone. I asked him about the beavers and found he knew a lot about the country, having spent years trapping and fishing on most of the Texas streams. He was then catching catfish for market in El Paso and San Antonio and he asked me to come over to camp and have dinner with him. He stopped and pulled in several big catfish of different species that he had picketed out on fish lines around the lower jaw, waiting for his next trip to market. He asked if I liked fish, and, assured that I did, he pulled in a four-pound "blue channel cat," killed it and took it to his shelter tent under the mesquites. He skinned it, pulled out the backbone, and cut it cross ways, rolled it in flour and filled a big frying pan full of hot bacon grease. Then he pounded some Arbuckle coffee with the head of a railroad spike in a tin can, made some fresh biscuits, got a bucket of cold, well-stewed dried apples, and dinner was ready. He probably had some beans, too, but they made little impression. I protested that we could never eat all of that fish, but I really ate most of it myself and decided then and there that catfish was the best fish in the whole world. I would have to go back to my journal to get his name but this old fellow and I were close friends and corresponded for years until he disappeared on a trip into Mexico. He is gone but he and his catfish dinner are not forgotten.

In the Chisos Mountains, in 1900, with H. C. Oberholser and Louis A. Fuertes, I often cast longing eyes toward the flat top of the range with its abrupt escarpment 7000 feet above camp. Few people ever went up there, but one day Louis and I took our saddle horses and rode as near to the abrupt slope as we could, picketed our horses and climbed the steep slope. We each took a biscuit sandwich, and I had a couple of pieces of jerked venison in my pocket, one of which I gave to Louis. I peeled the rind off my bacon and tucked it into the bark of the blue oak under which we ate lunch, thinking some hungry bird or mouse might get it, and I saw Louis drop half of his jerkey in the grass just because he found a few flies' eggs on it.

We reached the top of the mountains well before dark and found birds and mammals and plants up there that we had not seen before. We were not half ready to go down when it began to get dark, and we felt sure we would break our necks if we tried it, so decided to stay up there all night. We had not collected anything big enough to eat, so we just gathered a little wood and pulled enough grass to make a bed beside a big rock and went to bed. It was a cold night up there at 8000 feet, but when the fire went out we soon woke up and built some more and managed to sleep some.

Next morning we were up early, collecting birds and mammals new to us, so we forgot about both breakfast and lunch. It was well after noon when we started down the steep slope and we reached our horses about dusk. I remembered the bacon rind stuck in the tree bark two days before, but it was not there. I saw Louis kicking the grass aside where he threw the fly-blown jerkey, but it was gone, too. An old deer hound, lost in the mountains, had come along and was sleeping peacefully on my saddle blanket. He had probably made good use of the scraps of our previous lunch.

We saddled up and started for camp over a rough spur of the mountains and arrived long after dark. The campfire was not out, and several dishes on the coals promised plenty to eat. A bake oven of soda biscuits, a kettle of beans, some fried venison and stewed tomatoes, just plain camp fare, but wasn't it good, and plenty of it! For years after that when we met we always spoke of that supper.

In 1908, in the White Mountains of Arizona, I wanted to climb Ord Peak, so made a sandwich of a pancake and a couple of pieces of bacon and started up the mountain on foot. I could have gone on horseback by going twice as far and not so straight up, but I wanted to collect specimens and map the life zones, so went on foot. It was long past noon when I reached the peak at 10,000 feet, and a new species of chipmunk on top and some Hudsonian Zone plants kept me busy till nearly dark. There was no use trying to get back to camp that night, so I went down into the timber, made a grass bed beside an old log, gathered enough small chunks of wood to keep a little fire going in front of me all night, tightened my belt, and went to bed. I slept some in spite of the frost, and thought of a creek a little lower down where I had seen some fine trout on the way up. At daylight I was up and soon reached the trout stream, cut a willow pole, caught a few grasshoppers, and was anticipating a good breakfast. I took off my hat to get the trout fly always carried under the inner band, and found I had worn my old cap instead of my hat. There wasn't any fly, nor any breakfast—except for the trout. I threw the grasshoppers in to them with my blessing.

On reaching camp about three o'clock that afternoon I found that Hank Hotchkiss, my camp man, had killed two wild turkeys that walked through camp the day before, and had caught a good mess of brook trout. He said, he 'lowed I'd be hungry, so he had a frying pan full of fried turkey and another of brown, crispy trout. With some beans and biscuits and stewed peaches, I made out a good meal and took plenty of time to enjoy it. Since then I've always thought that turkey was much better fried than roasted.

Only recently I have had a great treat that goes back into history. In the pioneer days we heard much of the excellent flavor and great delicacy of buffalo tongues, but I first got into the buffalo country in 1887, the year after the last were killed in Montana, and only in recent years have these animals come back into the market in increasing numbers. In December of 1935 I happened to be in a place where some of the surplus buffalo were being marketed, and, to my surprise, the tongues were left in the heads sold to taxidermists or were thrown away with the skulls. I rescued one and had it cooked to order, boiled two and a half

hours, peeled, served whole, and carved straight across in slices half an inch thick. Other guests said it was good. To me it was above all the best tongue of any kind I ever tasted—sweet, rich, tender, but firm, with a distinctive flavor different from beef or veal or any other meat. Now I understand why the hunters saved buffalo tongues if nothing else, and I would like to place an order for one every year at any price.

There have been feasts of mushrooms, of frogs' legs, of oysters right out of the water, of fresh shrimps, fresh boiled Dungeness crabs on the coast of Oregon, of terrapin soup on the Louisiana marshes, and many rare meats and fruits and vegetables, but the meals that stand out clearest have been served with a hunger-sauce that many people have never tasted.

My doctor, good friend and philosopher as well as physician of long practice, says that some people would be better off if they occasionally skipped a meal, or even two or three meals. That is one way to develop an appreciative appetite; but plenty of strenuous out-door exercise, especially mountain climbing, will generally give one a keen appreciation of good food. The two, hunger and good food, should go together to make a meal worth recording.

## CALIFORNIA'S GRIZZLY BEARS

BY JOSEPH GRINNELL

WHEN talking about "bears" in the West, sharp distinction must be made between the two existing types, the black (or cinnamon) and the true grizzly. These two types are very different, both structurally and as regards their natural history. The black bear (with its often more common, brown or cinnamon phase of coat-color) is the kind now so familiarly known to visitors to our National Parks, notably Yosemite and Sequoia. The grizzly, about which my present article concerns itself, though small numbers yet exist in the northern Rocky Mountain region, is believed to be now extinct in California as also in all other Pacific Coast states. For this reason what I have to say concerning the modes of occurrence and the mannerisms of grizzly bears in California is, with intent, all put in the past tense.\*

In reviewing the multitudinous writings about bears in California, from the merest allusion in the narrative of an early traveler to an entire volume devoted to the subject, one thing soon becomes clear: The concept of "bear" in this State refers predominantly to the species *grizzly*, hence in the main *exclusively* of the blackbear species. Reasons for this may be adduced as follows. The two types of bears originally occupied for the most part separate portions of the State: The grizzly was a lowland and foothill-dwelling animal, occupying such territory west of the deserts south to the Mexican boundary; the black bear was essentially montane and a dweller in, or in the vicinity of, coniferous forests; and furthermore the black bear did not occur at all south of the extreme southern Sierra Nevada, in Kern County.

Thus it was the separate domain of the grizzly that was invaded by the early white settlers; and to them this was therefore *the* bear of California. Hence the Bear Flag, and also the innumerable place-names on modern maps, which record the one-time presence of this beast—some adventure in which a grizzly was the focal point; for example, Bear River, Bear Creek, Bear Gulch, Bear

\*Many of the facts used here are to be found, with others concerning bears, blacks as well as grizzlies, along with descriptions of each, in the book, "Fur-bearing Mammals of California," by Grinnell, Dixon, and Linsdale, University of California Press, 1937.

Canyon, Bear Valley, Bear Lake, Bear Flat, Bear Mountain, Grizzly Creek, Grizzly Flat, Grizzly Bluff, Grizzly Peak, Grizzly Island, Oso ["Bear"] Mountain, Cañada de los Osos.

Opinion frequently expressed by old-timers to the effect that grizzlies would not tolerate the presence of black bears within their home territories is borne out by the history of the respective geographic ranges of the two species: As that of the grizzly in certain parts of the State shrank, that of the black bear expanded—at least in those directions where factors of climate, food and shelter were favorable to the latter species. Thus, at the south, in the Tehachapi-to-Santa Barbara tangle of chaparral-clothed mountains, up even to the 1890's the metropolis of grizzlies, as these beasts vanished, blacks (or browns) came in from the southern Sierra, to the eastward, spread and multiplied, until, according to Forest Service reports they are now relatively numerous in Los Padres National Forest.

As to size, universal report indicates that the grizzly reached huge proportions, at least the male did relatively to the black or cinnamon bear. There was great disparity as between the sexes, much more so than in the case of the black bear. A mature female grizzly might weigh less than an old male black bear which, when fat, weighs around 400 pounds.

But tortuous and largely resultless has been my search for unquestionable figures as to weights of full-grown male grizzlies. "Round numbers" abound in the literature. Thus, Theodore Hittell reports James Capen ("Grizzly") Adams as stating that the "California grizzly sometimes weighs as much as two thousand pounds." Samson, one of Adams's tamed bears, weighed "over fifteen hundred pounds." John Xantus declared that one "gray bear" shot near Fort Tejon weighed 2000 pounds and that several weighed 1000 pounds. From the same vicinity, W. S. Tevis told me of one just killed weighing 1600 pounds. A "huge" male killed in the Santa Ana Mountains was "estimated" to weigh 1400 pounds, so C. Hart Merriam was informed.

It is reported by James Hobbs that P. T. Barnum, the showman, in the 60's posted a standing offer of \$800 for any live grizzly bear weighing as much as 1000 pounds. For some time there were no takers, until a man by the name of Cobb heard of a bear near San Jose reportedly of extraordinary size. Cobb, so

the story goes, finally got the bear by using a lure of molasses mixed with brandy and, by boat via Panama, it was safely delivered to Barnum in New York. It was exhibited for some years—until destroyed in a disastrous fire. That "record" bear is stated to have weighed 1100 pounds.

The famous grizzly "Monarch," captured in Los Angeles County in 1889, was originally reported in the newspapers as "the largest captive bear in the world." When it had reached its cage in Golden Gate Park, worn out from its efforts to escape, its weight was "estimated by the best of judges at from 1200 to 1600 pounds" (*vide* Allen Kelly). When "Monarch" died, in 1911, Vernon Shephard, the taxidermist who mounted its pelt, found the weight of the animal to be 1127 pounds, and it was fat. Some indication here may be had of a fair discount to apply to first estimates!

It seems to me evident that rarely, perhaps never, in the instances cited above (save the last) were actual steelyards or scales resorted to. My own feeling is that 1200 pounds was likely close to the maximum for the weight of a male grizzly bear—decidedly less than "2000 pounds." But this is no disparagement, when we recall that it is a fair-sized, open-range steer or horse that weighs much more than 1200 pounds "on the hoof." Verily, a wounded, charging bear of even 1200-weight would look "huge" to the chargee—and that impression would last a lifetime and might well grow!

However, it was the much smaller, mother bear which was involved in most of the encounters wherein the man was worsted—injured or killed. The weight of an old female shot in 1886 near Ben Lomond, Santa Cruz County, on authority of Walter R. Welch weighed "just 642 pounds dressed." The last bear taken in southern California, in 1916 near Sunland, Los Angeles County, was a mature female, as shown by its skull now preserved in the California Museum of Vertebrate Zoology. It was weighed entire on butcher's scales which it tipped at only 254 pounds. The two figures for females here given probably represent somewhere near extremes of weight for full-grown animals of that sex.

As a possible further check on the weight question, I weighed, air-dry, the skull, without lower jaw, of the Sunland female. Then, through the kind office of Alexander Wetmore, Assistant Secretary of the Smithsonian Institution, I was supplied with the weight, similarly taken, of the largest Xantus-taken grizzly skull, as

now preserved in the United States National Museum. Purpose--to get a ratio, from a bear of known total weight, from which to figure the approximate weight of a big male grizzly. The figures are, in grams, Sunland female skull, 777; Tejon skull, 1406. Therefore 254 (pounds) is to  $x$  (pounds) as 777 (grams) is to 1406 (grams);  $x$  equals 474 pounds. Not conclusive, but with some significance surely!

The grizzly bear was an omnivorous feeder. Meat, fresh or putrid, was sought. Certain individual grizzlies became killers--latterly of cattle and sheep. Before man's stock animals became available, the native ungulates--elk, deer, antelope--doubtless were killed on occasion, though these fleet-footed animals probably easily eluded the tactics of the bears save on the part of such weakened or decrepit individuals as straggled behind the drifting herds and were destined for early death anyway. "Kills," more or less completely buried and tainted, left by mountain lions or jaguars were easily located through the bears' acute sense of smell. Small fry, rodents, even insects, were obtained by digging and log-rolling. Honey, wild, and later from apiaries, was a delicacy eagerly sought for.

Foods of directly vegetable source included roots and bulbs, for which, according to John Xantus, the soil would be dug up skillfully and to remarkable depths. In the vicinity of Fort Tejon, on a single moonlight night, one or more bears would "dig up many acres of land" as pigs would do, so that hardly a grass blade remained undisturbed. The grizzly, with its broad "hands," and "fingers" terminated with long, strong claws, was preëminently a digger. As a result, the claws of the bears shot at Fort Tejon were usually much worn. The same equipment enabled the bears to bring to mouth, berries, fruits and acorns as these grew in place on the branches. The vertical reach of a mature grizzly standing erect might well have been ten feet--which meant access to a foraging *depth* of chaparral of that extent.

I might speculate here that the "huge" grizzly of southern and coastal California owed its size, in part, to an adaptive trend toward a specialized and successful mode of food-getting in the great chaparral belt. The grizzly, even young ones, never climbed trees; it was a digger and especially a *reacher*. In season, acorns were eaten avidly; more accounts mention this food than any other

except flesh food. Next come berries of manzanita, coffee-berry (cascara) and, especially in the upper Sacramento Valley, wild grape. Doubtless no fruit, nut or berry was passed by, and we may add toyon, wild cherry, gooseberry, elderberry, ceanothus. We may surmise that leafage of some plants was also eaten, especially when new and tender.

Vegetable food of one kind or another was thus available, by digging or reaching, the entire year. I am inclined to think that the grizzly, despite its reputation as a stock killer, was far more vegetarian in its normal diet than carnivorous. As to population numbers prior to the period of rapid settlement of California by white men, we can only judge rather vaguely from such general statements of pioneers as are available. The words "common" and "abundant" appear frequently; but just what these meant in terms of bears per square mile, there is frankly nothing to fix upon.

From Humboldt County we have a statement to the effect that "40 bears" were "counted" in one morning in sight from a high point in the Mattole region; that was in the 1850's, by a pioneer hunter, Seth Kinman. Around Fort Tejon, Kern County, John Xantus, writing under date June 5, 1857, said [verbatim]: "We have here grizzlies in great abundance, they are really a nuisance, you cannot walk out half a mile without meeting some of them, and as they just now have their cubs, they are extremely ferocious so I was already twice driven on [up] a tree, and close by the Fort!" Concerning the San Bernardino Mountains, I have record of a statement that one man counted 14 bears at one time in the 60's out in that part of the meadow in sight from his camp on the edge of Big Bear Valley.

There are many statements of generally similar purport. But taking them at face value, they could well be explained as pertaining to extraordinary congregations of the animals from adjacent territory of considerable extent; for example, on moist meadowlands where maturing roots of preferred kinds were being sought, or in valley-bottom tracts of oaks producing heavy crops of acorns. Also we must take into account mere impressions of numbers gained from real abundance of "sign" (diggings, footprints) — made by one or a few animals on several successive nights, or as formed from the devastating activities of one or a family of grizzlies in an apiary or a pigpen on a series of occasions.

Now putting together all my "impressions," derived from my own knowledge of conditions in southern California beginning in the late 80's, from all the accounts I have read and the interviews I have had with older men, and from scrutiny of maps, I venture an estimate of a mean population, before marked reduction of numbers set in, of one adult grizzly to 20 square miles of suitable territory. That would be, for example, in Monterey County (3330 square miles) a population at one time, of 166 adult grizzlies. Furthermore, assuming that one-third of the State's area (155,652 square miles) was occupied by grizzlies in the same density, then there would have been a total population in California, at any one time prior to, say, 1830, of 2595 adult grizzlies. I am inclined to think this is a conservative estimate.

The rate of reproduction in the grizzly is indicated by fair agreement of testimony from various sources to have been as follows: Females bred first when they were two years old and bred thereafter every year. Each female bore one or two cubs, rarely three. My friend, Vital Rèche, now of Mono, but long resident in northwestern San Diego, Orange and San Bernardino counties, is of the opinion that where one mother was seen with three cubs, one of these had been "picked up"—one that had belonged to another bear, lost from her or whose own mother had been killed. Cubs left their mother, to fend for themselves, when about eleven months old, females being then about two-thirds grown, males not more than one-fourth old-age size. [But these statements, be it emphasized again, are based on no weights or measurements actually taken from bears of known age!]

It would thus appear that the reproductive rate of grizzlies was remarkably high, indeed quite like that of cattle. If a single pair of mature bears produced only one cub each year to reach the age of two years, we could figure from the above data that at the end of ten years, all the offspring also breeding as they reached breeding age, there would be twenty-eight bears. At this compound rate, the country would have soon been overrun with grizzlies, to their own detriment; so there must have been effective checks to unlimited reproduction, long before the white-man and his gun appeared on the biotic scene. We can only suggest some factors that may have operated to stabilize the population: (1) Antagonism, to mortal degree, of mature males toward young bears, first out in

the world, venturing into their individually established "territories"; (2) limits of food-supply, in seasons or years of minimum availability, effective in rendering young, senile or weakly individuals fatally susceptible to disease, harsh weather, or attacks of other carnivores; (3) limits of areas affording subsistence, with factors just named operating marginally to stop spatial escape of surplus numbers; (4) decrepitude, from accident, such as breakage of teeth (shown in some skulls preserved in museums), or as com-comitant with old age, with ultimately inevitable results also just suggested. Adjustments for these natural, adverse factors down through time had doubtless led to the inherent reproductive ratio (possibly 50 per cent per annum, granting a 50-50 sex-ratio in the general population which we suspect to have obtained), and with a "factor of safety" besides. But this factor of safety in multiplication rate did not of course suffice to meet the heavy draft imposed by man, with gun, trap and poison.

Grizzlies in California never hibernated, as far as we know, as do the black bears in our higher country—this being a scheme of Nature to tide populations over a seasonal period of food scarcity. We have no clue to maximum age reached by grizzlies in-the-wild, save as afforded by the history of "Monarch." This bear, fully mature when captured in 1889, died in Golden Gate Park in 1911, when it must have been at least 26 years old.

As a boy, living in Pasadena from 1885 to 1898, I heard much about bears. My father was a physician and he was wont to visit various people living along the base of the San Gabriel Mountains in that vicinity. Most of these people kept bees, and the usual story related to the raiding of the hives by a bear. Honey must have been exceedingly attractive to the beasts, for they would come down repeatedly at night out of the safety of the heavy mountain-side chaparral to within five miles of the center of town. Occasionally a bear was killed. I remember seeing fresh bear tracks in the summer of 1891 in the dust of the road below old man Brunk's cabin in the lower Arroyo Seco Canyon, and at another time in Eaton Canyon.

On summer camping trips in 1895 and in 1897, I saw bear sign plentifully back in the San Gabriels, in the neighborhood of Waterman Mountain and Mount Islip. In the mornings, tracks would be seen in the trails close to our campsites, and one night

our burros were stampeded, necessitating a hike after them clear back to Chileo. Again and again of mornings I would try following the fresh bear tracks, but these, if not lost, would soon lead down into the heavy chaparral of manzanita and deer-brush clothing the steep heads of canyons tributary to the West Fork of the San Gabriel River. I would follow the route a bear had taken, through or under the otherwise practically impenetrable tangle, often on my hands and knees, poking my rifle ahead of me. Sometimes I would see wisps of hair on broken branch ends. Insofar as I can recall, it did not occur to me that a bear could hear me coming from afar and would inevitably remove himself from the vicinity even if he had bedded himself down for the day. Neither can I recall any feeling of fear on my own part; I was obsessed only with the spirit of adventure, the yearning to "kill a bear," as two or three other Pasadena boys had done. But I never caught sight of any bear; nor have I ever seen a live Californian grizzly, save for "Monarch," behind the bars in Golden Gate Park, prior to his demise in 1911.

One of the Pasadena boys who had become a hero in my young eyes was Walter L. Richardson, now of Porterville. On May 16, 1894, he shot a nearly full-grown male grizzly in Big Tujunga Canyon. What is more, unlike very many hunters, he took pains to save the skull and pelt of this animal in first-class shape, in later years preserving them against damage from insects and sunlight. Through gift from Mr. Richardson, these now comprise the most perfect specimen of California-taken grizzly contained in the California Museum of Vertebrate Zoology, hence a possession of the State. Important descriptive comment based on this specimen has been printed in scientific literature.

Grizzlies persisted in the fastnesses of the San Gabriel Mountain region more than twenty years longer. Rumors of bears killed, now and then reached me, but to my knowledge no further scientific specimen was saved or formal record made from there until the year 1916 when, on October 28, Cornelius B. Johnson trapped and killed a veritable grizzly near his ranch in the lower Tujunga Canyon only two miles or so from Sunland. This bear, a mature female, yet weighing only 254 pounds, had come down from the brushy mountainside near-by on several preceding nights to feed on grapes in Johnson's vineyard. As far as I know, this

was the last grizzly south of Tehachapi. Its skull and some of the body bones are now preserved in the Museum of Vertebrate Zoology.

The last authenticated or reasonably reliable records of living grizzly bears in different sections of the State known to me at this writing are as follows: Humboldt County, 1868; Mendocino County, 1875; Colusa County, 1862; San Mateo County, 1879; Santa Cruz County, 1886; Monterey County, 1885; Mariposa County, 1887; Tulare County, 1922; vicinity of Fort Tejon, Kern County, 1898; Santa Barbara County, 1912; Los Angeles County, 1916; Riverside County, about 1895; Orange County, 1908; San Diego County (extreme northwestern), 1900 or 1901; San Diego County (south-central), 1871 or a bit later.

The parts of the State in which grizzlies were able to persist longest were thus those where heavy and continuous chaparral, therefore lack of any grassland, kept out the sheep-herder. These were not, however, necessarily the parts of the State in which the bears were originally most numerous. In general, their last strongholds were in the Santa Ana Mountains, Orange County, the San Gabriel Mountains of northern Los Angeles County, the mountains of Santa Barbara County, and the western flank of the southern Sierra Nevada in Tulare County, the latter witnessing the very last stand of any Californian grizzly.

We have abundant record of what men thought about grizzly bears but little to judge from as to what the bears thought about men. The responses of the bears to the presence of man and his works are only to be inferred from an accumulation of incidents recited by human narrators.

My friend, Vital Cayton Rèche (interviewed June 19, 1937), whose father founded Fallbrook, San Diego County, in 1869, tells me the following pertinent facts from his memory of his early days in that region, in the 1870's and 80's. Grizzlies were met with often by him, when riding the cattle ranges. It was in mornings and evenings that he would see them, especially in damp places at the margins of meadows, digging for roots. Their eyesight was relatively poor, but sense of smell keen. A movement might catch a bear's eye when the animal's head was up. Then it would rear on its haunches, after the fashion of a picket-pin ground-squirrel, and look intently at the intruder. If the observer stood still, the

bear, if a male, "after watching you a while would shake its head from side to side, then drop to all fours, turn, and start running away." Rèche never knew a male to attack voluntarily, that is, if not "bothered" (wounded). It was the mother bear that was prone spontaneously to attack a person coming suddenly upon her and her cubs at the edge of the brush. Especially it was when a hunter had seen a cub first, and witlessly shot at and wounded it so that it "cried," that the mother grizzly would come forth and charge, with no uncertain objective. It would appear from all accounts that this was a most ferocious creature: the mother defended her young!

From Rèche's, and all other accounts, I thus gather that it was the female of the species, much the smaller in size of the two sexes, that exhibited the "ferocity" so traditional of the grizzly. Probably three-fourths of the recorded killings and woundings of human beings by bears was done by the mother bears. Rèche knew personally of six men thus killed in the Temecula Mountain region in one ten-year period. He told me that when the repeating rifle (Winchester) came in, there was much more careless, therefore dangerous shooting of bears than in the previous era of the single-shot rifle, when a man knew that he had just one chance. "A wounded bear charged right at the hunter, if it could see him."

The attitude of the whiteman toward grizzly bears has varied greatly, according to era, his vocation, and his individual temperament. No general definition seems possible, save as involving the ultimate aim to kill or to capture the bears. An early direct value in the killed bear was its use for food, inasmuch as many of the frontiersmen had to "live on the country."

On March 7, 1828, Jedediah Smith, leading a band of fur-trappers up the Sacramento Valley, entered in his diary the comment concerning a bear just killed in the neighborhood where Marysville was later founded, that his men were "feasting, for the hunter of the Buenaventura [Sacramento] Valley at the distance of 2000 miles from his home may enjoy and be thankful for such Blessings as heaven may throw in his way." Note that a grizzly under those circumstances was a *blessing*!

Another purpose in bear killing is in evidence in the reminiscences of George Nidever. In the year 1837 he shot 45 grizzlies in the neighborhood of San Luis Obispo; and altogether during

his wanderings up and down the California coast he thought he had killed "upwards of 200 grizzlies." Judging from the tone of his narrative, Nidever's chief motive in killing these bears was to demonstrate thereby his accurate marksmanship and his cool-headedness. His superiority in these respects over his fellow frontiersmen was a matter of great pride with him. "At this time," he says, "there was no sale for bear skins, so that we never took the trouble to skin them unless for our own use or to make a present to some friend or acquaintance."

As has been described many times, grizzlies were caught alive by vaqueros to use in bull-and-bear fights—a form of sport cruel but popular at one period around some of the missions and continuing until the 1850's, at San Fernando, according to John Xantus. Later, a few of the bears were captured and kept alive for exhibition or "zoo" purposes. In one instance, that of "Grizzly" Adams, if we accept Hittell's appraisal of the man, a sort of esthetic appreciation of the character of individual grizzlies was manifest. At least in his later years, Adams had developed a personal attachment for his ursine captives amounting almost or quite to affection.

In the 1850's and 60's there developed a demand for both the meat and hides of all sorts of large mammals, not alone deer and elk, but also, definitely, of bear. James Hobbs, who did this sort of market-hunting for a time in San Diego County, shipped meat fresh by boat in winter from San Diego to San Francisco. He soon found, however, that the meat, dried, meant more profit, since it was wanted by the miners; and he says that dried bear meat brought twice the price that deer meat did. Thus there had begun an industry known as "jerky-hunting," and this continued until the late 80's, and surreptitiously, after passage of laws against market-hunting of deer, until much later. No doubt the reduction of grizzlies locally was hastened by this market-hunting, with the commercial motive as the main one.

Then there had already begun to crystallize the natural antagonism of the stock man toward any wild animal that caused loss to his flocks and herds and hence reduced his profits. Not, however, until the great cattle and sheep ranges of the lowlands were all taken up, and cultivation of valley lands for grain and other crops set in, did the pressure begin to develop in extreme measure

toward the use of summer-time grazing ground back in the mountains. A plan of "economics" evolved whereby more stock could be raised by driving the herds out of the lowlands in the dry-season there.

The late Henry W. Henshaw, naturalist attached to the Wheeler Surveys, recording his field experiences in 1875, wrote of the grizzly as follows: "Perhaps few animals have suffered more from persistent and relentless warfare waged by man than this formidable Bear. To the sheep owners especially, whose immense flocks [each] under the care of one or two men are driven far into the heart of the mountain wilderness to pass the summer months, are these animals special objects of dread. Accordingly every means in their power are used for their extermination. A supply of strychnine is part of the outfit of every shepherd, and by means of this the number of Bears is each year diminished, till in many sections where formerly they were very abundant they have entirely disappeared."

It would appear that, according to the prevalent opinion of that era (and this opinion holds right down to the present day as demonstrated in the governmental policy of predatory animal "control"), the remotest patch of grass or browse simply *had* to be made safely accessible to cattle and sheep!

One indication of the rapid exhaustion of the natural resources of our country is the disappearance one after another of the native species of animals. The first to go have been those kinds which are vulnerable by reason of relatively large size, slow rate of reproduction or specialized food requirements—at the same time kinds which have impinged more or less upon the white man's material interests. And there is scarcely a wild animal in the State, from mole to elk, that doesn't do some damage, in some place, to some man's "property."

A few of the scientific names which man has bestowed upon grizzly bears are *Ursus ferox*, *Ursus horriæus* and *Ursus horribilis*, with meanings which are apparent. Man has named himself, *Homo sapiens*—"profoundly wise." I wonder!

UNIVERSITY OF CALIFORNIA,  
MUSEUM OF VERTEBRATE ZOOLOGY,  
August 14, 1937.

## THE NEW CASA DIABLO "GEYSER"<sup>1</sup>

BY ARTHUR H. BLAKE AND FRANÇOIS E. MATTHES



THOSE who remember the Casa Diablo Hot Springs, near Mammoth Lake Post Office, as a group of small bubbling springs discharging hardly enough hot water to supply a modest roadside bath establishment, will be surprised to see there now a beautiful steaming fountain spouting to a height of 60 feet or more. The transformation occurred suddenly, without premonitory symptoms, on December 21, last. Though generally referred to as a geyser, the fountain is not properly classed as such, for its flow is continuous and remarkably constant, not intermittent and spasmodic, as is the habit of true geysers. At the time of this writing, the fountain is still spouting, having done so steadily and, so far as is known, without appreciable lessening of energy, for 3½ months—a fact that is in itself of no little scientific interest.

According to the *Los Angeles Times* of January 1, 1938 (Part II, p. 3), the fountain came into existence following a slight earth tremor in the Mammoth Lakes region, but there appears to be no real foundation for that report. Roy Boothe, Supervisor of the Inyo National Forest, assures us that no one living in the vicinity of the springs had noticed any tremor on December 21 and that there was no sudden increase in flow of water, as rumored, in the diversion tunnel of the Department of Water and Power of the City of Los Angeles that is being driven under the Mono Craters. From the University of California, finally, comes definite information that no tremor was recorded on December 21 at any of the seismograph stations on the east side of the Sierra Nevada.

The cause of the sudden outbreak at Casa Diablo is still a mystery, but to Roy Boothe we are indebted at least for the following history of events that led up to it: About eight years ago Lloyd Summers, the owner of the property, undertook to enlarge the orifice of the main spring with a well-drilling outfit. A violent outburst of steam ensued that wrecked the drilling tools, but, fortunately, left the six-inch casing in place. Thereupon the well became obstructed in some way, and the flow again dwindled. Finally, on

<sup>1</sup> Published by permission of the Director of the U. S. Geological Survey.

December 21, last, without human intervention, the obstruction—whatever it was—suddenly gave way, and the steaming jet shot up.

That the hot water and the accompanying steam come up from considerable depth is to be inferred both from the constancy of the flow and the high temperature.<sup>2</sup> The precise nature of the source, however, is still a matter of conjecture. Their situation in an area of relatively recent volcanic rocks suggests strongly that Casa Diablo Hot Springs, as well as some of the neighboring thermal springs, are fed by superheated steam emanating from a mass of hot lava deep beneath the surface. Yet there is equally good reason for supposing that they are associated with faults through which steam rises from hot igneous rocks at still greater depth, for the country at the eastern base of the Sierra Nevada is traversed by a multitude of such fractures, and several hot springs are definitely known to be located on them. Indeed, the peculiar configuration of the little valley in which Casa Diablo lies seems indicative of the locus of a fault.

Whichever explanation is correct, it seems probable that only a small proportion of the ejected steam and water is truly "juvenile"—that is, produced directly by Mother Earth—and that the bulk was originally precipitated on the surface as rain or snow, and has become heated by contact with the hot rock masses or the steam escaping therefrom after having percolated down to sufficient depth. Perhaps some of the water merely circulates, returning into the ground after ejection, in order to be ejected again.

The new Casa Diablo fountain deserves to be watched closely. Its future behavior—whether it will remain constant, or decline by degrees, or rise in wet and fall in dry seasons—should afford many a clue to the foregoing problems, and thus may throw light on the origin of some of the other mysterious hot springs along the eastern base of the Sierra. In any event, Casa Diablo is the most phenomenal of all those springs, and it is to be hoped, for the sake of its rare beauty, that it will not die down.

<sup>2</sup> *Geological Survey Water-Supply Papers*, 335, 1915, and 679-B, 1937, give for the Casa Diablo group of springs temperatures ranging from 115 to 194 degrees Fahrenheit.

# SIERRA CLUB

Founded 1892

MILLS TOWER, SAN FRANCISCO, CALIFORNIA



THE PURPOSES OF THE CLUB ARE: *To explore, enjoy, and render accessible the mountain regions of the Pacific Coast; to publish authentic information concerning them; to enlist the support and co-operation of the people and the Government in preserving the forests and other natural features of the Sierra Nevada.*

JOHN MUIR, President 1892 to 1914

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## NOTES AND CORRESPONDENCE



### MAINTENANCE OF RECREATION VALUES IN THE HIGH SIERRA

#### A REPORT TO THE UNITED STATES FOREST SERVICE

*Last summer, several members of the Sierra Club were invited by the Regional Forester of the United States Forest Service to accompany a small group of Forest Service officials on an inspection trip in the High Sierra. Mr. Robert Marshall, who had a short time before been appointed Chief of the Division of Recreation and Lands, was one of the party. Shortly afterwards, Mr. Marshall wrote to Professor Hildebrand as follows:*

While we were together on that most delightful pack horse trip into the High Sierra country, I asked you if you would appoint a committee to recommend to the Forest Service how it should develop and maintain the recreation values in the whole High Sierra country. At that time you signified interest in the matter and suggested that I make a written request.

I would now like to repeat my desire that the Sierra Club, which has probably done more thinking than any other organization on the proper recreational development of the High Sierra as a wilderness country, should give us the benefit of its thought. As you know, the Forest Service is now firmly committed to the policy of maintaining wilderness conditions in this country. However, it is one thing to believe in such a policy and another thing to give it the best practical effect. As you realize, there are many difficult and perplexing problems to be solved if this area is to be maintained not only in a wild condition but also in a fresh condition. We all saw overused campgrounds, overgrazed meadows and also vast unused areas. We discussed the problems of giving young people and low income groups who at present are not able to afford to take advantage of this wilderness, a chance to get the immense stimulation and the important basis for future development which the wilderness alone can give.

*There followed a list of seven problems upon which advice was asked. Professor Hildebrand's reply, incorporating the report of the committee, is printed herewith in full, for not only does it contain matters of very great interest to all members of the Sierra Club, but it also is an excellent example of the Sierra Club's contribution to the public welfare, and, as such, is especially commended to those who have recently joined the Club, for their study and consideration. Since its inception, the Sierra Club has been ever ready to coöperate with government agencies by offering counsel on subjects upon which its members are qualified to speak because of special familiarity with facts and conditions.—Editor.*

Sierra Club, San Francisco, December 27, 1937.

Mr. S. B. SHOW, Regional Forester,  
United States Forest Service, San Francisco.

Dear Mr. Show:

Upon receipt of a request dated August 26, 1937, from Mr. Robert Marshall, Chief of the Division of Recreation and Lands, United States Forest Service, that the Sierra Club prepare a report to you upon the development and maintenance of recreational values in the High Sierra, I appointed a committee consisting of the following members: Walter A. Starr, Piedmont (chairman); Arthur H. Blake, Berkeley; D. Raymond Brothers, Los Angeles; Joel H. Hildebrand, Berkeley; Walter L. Huber, San Francisco; Richard M. Leonard, Oakland; Norman B. Livermore, Jr., San Francisco; Ralph J. Reed, Los Angeles; Bestor Robinson, Oakland.

The Sierra Club has taken Mr. Marshall's request as presenting an opportunity for important public service and I wish to assure you of our appreciation of the splendid ideals of the Forest Service which find expression in its attention to the maintenance of the finest values of the High Sierra.

This committee has held a number of meetings, has consulted a number of other competent persons, and has drawn up a report upon the major items covered by Mr. Marshall's request, which I transmit to you herewith. We have not exhausted the various parts of our problem and request the privilege of supplementing this report at a later date. We felt it to be desirable to report upon such matters as we could at this time in order that the Forest Service might take our suggestions into account in planning for next summer.

The following report, dealing with the problems in the order presented, was reviewed and endorsed by the Board of Directors of the Sierra Club, at its meeting on December 4, 1937.

#### TRAILS

Mr. Marshall asked the following questions regarding trails:

"1. How the present overuse on main trails can be eliminated by distributing the use over a larger area.

"2. How, in making this wide distribution of use, certain areas may still be preserved in what might be termed a super-wilderness condition, or, in other words, kept entirely free even from trails, in order that a traveler can have the feeling of being where no one has been before."

The present system of trails, comprising the John Muir Trail extending along the range into which laterals lead from east and west from road terminals, with a few suggested additions described below, gives adequate access to the High Sierra area.

CLASSIFICATION. There should be a classification of *High Sierra trails* into three different types, as follows:

1. Main trails on which the bulk of maintenance and construction work would be concentrated.
2. Secondary trails which would be kept open for travel but on which only a moderate amount of maintenance work would be done.
3. Trails on which no construction or maintenance work whatsoever would be done.

The proposed main trail system (1) is listed below, according to the national forest in which located.

A marked map is also attached to clearly indicate these trails in the region from the Sonora Road on the north, to Cottonwood Pass on the south, with proposed additions and abandonments.

The main trail system is marked in red, with parts involving new construction circled and crossed. It is suggested that this system of trails be brought up to a standard considered satisfactory for pack-stock, and maintained in such condition.

Secondary trails are marked in blue. It is suggested that such trails be given enough attention to keep them passable.

A few old trails and routes are marked in green. It is suggested that, while such trails be recognized as routes of travel, no maintenance is required for the present and that such routes are not recommended for pack-stock.

Old trails marked with cross-hatched lines of red are recommended for abandonment for the reason that they are badly routed, difficult to maintain and not needed since other trails have been built and improved, or are expected to be improved, on better routes.

**MAIN TRAIL SYSTEM. Stanislaus National Forest:** From Kennedy Meadows to Bond Pass, Emigrant Lake and Huckleberry Lake.

**Mono National Forest:** From Leavitt Meadow to Bond Pass; from Leavitt Meadow to Buckeye Pass; from Buckeye Creek to Buckeye Pass; from Green Lakes to Virginia Pass; from Virginia Lakes to Summit Pass; from Lundy Lake to Saddlebag Lake; from Walker Lake to Mono Pass; from Silver Lake to Parker Pass via Gem Lake; from Gem Lake to Muir Trail at Rush Creek; from Gem Lake to Agnew Pass; Muir Trail from Donohue Pass to Island Pass; Silver Lake road to San Joaquin Mountain.

**Inyo National Forest:** From Mammoth Lakes to Mammoth Pass; from Mammoth Lakes to Duck Pass; Convict Lake, Dorothy Lake circuit; from Rock Creek to Mono Pass; from Rock Creek to Pine Creek and Pine Creek Pass; from North Lake (Bishop Creek) to Piute Pass; from South Lake (Bishop Creek) to Bishop Pass; from Big Pine Creek Road to Bishop Pass via Big Pine Creek Lakes (requires building new trail from the lakes to Bishop Pass); from end of road to Sawmill Pass; from Onion Valley to Kearsarge Pass; from Shepherd Creek road to Shepherd Pass; from Hunters Flat to Whitney Pass; from Cottonwood Creek road to Army Pass; from Cottonwood Creek road to Whitney Meadows via Cottonwood Pass; from Kern Canyon to Siberian Pass via Golden Trout Creek and Whitney

Meadows. Trails to be abandoned: Trail to Baxter Pass; trail to Taboose Pass; trail from Shepherd Creek to Junction Pass.

*Sierra National Forest:* Muir Trail from Island Pass to Mather Pass; from Clover Meadow to Fernandez Pass; from Soldier Meadow to Isberg Pass; from Soldier Meadow to Devils Postpile; from Agnew Pass to Thousand Island Lake and Muir Trail; from Agnew Pass to Muir Trail on Middle Fork San Joaquin; from Shadow Lake to Devils Postpile via the high trail and Minaret Creek (this route is suggested as a new route for this section of the Muir Trail in order to avoid the road which has been built along the San Joaquin River with public camps, etc. This route is also a superior route in other respects and affords better campsites); from Mammoth Pass to Muir Trail; from Duck Pass to Muir Trail; from road to Muir Trail on Mono Creek and up Mono Creek to Mono Pass; from Florence Lake to Muir Trail on South Fork San Joaquin River; from Muir Trail at Piute Creek to Piute Pass; from McKinley Big Trees to Muir Trail at Evolution Creek via Hell-for-Sure Pass; from Coolidge Meadows (Cliff Camp) via Woodchuck Creek and Devils Punchbowl to Hell-for-Sure Pass Trail; from Coolidge Meadows (Cliff Camp) to Tehipite Valley; from junction of Middle and South Forks of Kings River up Middle Fork to Muir Trail at Palisade Creek (this involves a new trail from river junction to Tehipite Valley and improvement of the trail above Tehipite); from Bishop Pass to Muir Trail; from Simpson Meadow to Granite Pass.

*Sequoia National Forest:* Muir Trail from Mather Pass to Foresters Pass; from Kings River Canyon to Granite Pass; from Kings River Canyon up the South Fork to Muir Trail (this involves a new trail from Paradise Valley to the headwaters basin of the South Fork); from Paradise Valley to Muir Trail on Woods Creek; from Sawmill Pass to Muir Trail; from Kearsarge Pass to Muir Trail; from Kings River Canyon up Bubbs Creek to Muir Trail; from Bubbs Creek to East Lake and Reflection Lake; from Kings River Canyon up Roaring River to Scaffold Meadow (this involves building a new trail); from Big Meadow road via Rowell Meadow and Scaffold Meadow to Colby Pass and Elizabeth Pass; from Bubbs Creek to Scaffold Meadow via Sphinx Creek.

**NEW TRAILS.** New trails proposed are the following:

1. From the Kings River Canyon (South Fork) up Roaring River to Scaffold Meadow.
2. From the mouth of Woods Creek in Paradise Valley, up the South Fork of Kings River to meet the Muir Trail in the upper basin.
3. From the new highway into Kings Canyon, up the Middle Fork into Tehipite, thence to Simpson Meadow and Grouse Meadow improved.

(Nos. 2 and 3 would be important laterals from the west, following the canyons or natural routes. They would not only better distribute the travel,

but also would furnish much needed access to the high mountains from the west. They would make the high areas accessible very early in the season, avoiding the crossing of high passes. They would furnish a quick and easy means of reaching the high areas of Kings River by the Forest Service in the Sequoia and Sierra forests, which are now difficult to reach from headquarters and hence impracticable to administer. They would make possible access to the trails and passes early in the season, so that necessary trail repairs could be done before much use of the trails in summer.)

4. From Upper Big Pine Creek Lake to Bishop Pass, thus affording a short outlet over the summit from Big Pine Creek. (There is now a long, roundabout trail around the Inconceivable Range.)

5. On the east side of Whitney Pass. Here the trail should be changed to avoid the heavy snow bank which at present closes the trail for pack-stock until late July or August. Coöperation with Superintendent John R. White, of Sequoia National Park, is suggested.

6. The John Muir Trail from Shadow Creek to the Devils Postpile and Red's Meadow (Middle Fork of San Joaquin River) should be re-routed via the old "high trail." (See list of trails—Sierra National Forest.) Due to the changed conditions in this region, as a result of road building and public camps along the river, this high trail should be improved as soon as possible to a standard equal to that of the Muir Trail north and south of it.

We urge that the trail system be limited to the one here outlined. There should be *no more* trails made, neither main trails nor short laterals, unless future conditions demand such a trail within the true spirit of primitive area protection. It is to be expected that from time to time there will be strong pressure for laterals into high basins and other primitive areas. Such pressure must be resisted if these areas are to be preserved. Having arrived by one of the trails here listed at some point of access to the high country, the traveler would then have a vast area of high mountain basins and slopes (lying between the canyons followed by the trails) and the peaks above, in which to explore and knapsack about. By excluding all trails, these great areas of rugged and varied beauty would be preserved for all time as true wilderness.

The present trail system should be brought up to a fair standard but not too high a standard. Parts of many trails are good enough, but there are rough spots, wet crossings and very rough passes which should be improved. A trail of the standard of that now ascending Bubba Creek, with improvements such as those noted above, would seem to be high enough. The committee agrees that trails should be well built so as to be easily maintainable, but they should be planned to fit the natural topography rather than made to conform arbitrarily to some standard grade.

FORDS. More attention should be paid to the signing and maintenance of good fords. This requires *construction and repair* of both animal- and foot-

bridges. The necessity for bridges should be judged by *maximum water flow*. *Foot-logs* should be provided over many streams where no bridges for animals are necessary.

**SIGNS.** It is recommended that trail signs be confined chiefly to trail intersections. They should mark the trail clearly, give distances between junction points, be made of permanent material (preferably enameled on steel) of a standard size (say 8" by 10"). Wherever possible they should be attached to trees rather than posts, but where posts are used they should be *short*, as experience has demonstrated that higher posts are clawed and destroyed by bears, especially when painted a light color. Short galvanized steel angles are more durable than wooden posts.

**PASSES.** Often a relatively small amount of work will free passes from snow and thus benefit packers and campers, besides better distributing the travel on trails. More of this work should be done *early in the season*.

### CAMPSITES

The present condition of a great many High Sierra campsites is deplorable. To remedy this situation, it is essential that:

1. Present dirty camps be cleaned up 100%. Thorough cleaning is necessary because it is much harder to enforce camp cleanliness in a camp that is already dirty.
2. Camp rules be strictly enforced. Cutting of living trees or branches from trees be forbidden. No digging up of meadows for fish worms.
3. Signs urging camp cleanliness, etc., be placed near the starts of trails, and at much used campsites. It is to be hoped that thoughtless and careless campers may be educated to observe camp rules as they have been to prevent fires.

### GRAZING

**PACK-STOCK.** In the vicinity of much used campsites, which quite naturally are often located about the lakes and in regions of greatest beauty, great damage is being done to the flowers and meadows by over-feeding and trampling by livestock. It would seem that some practical plan must be worked out promptly with packers and others to graze or feed stock in a way to minimize this damage which is increasing rapidly as the use of pack-stock grows from year to year. At much used campsites stock may have to be grazed at some distance from camps.

**OTHER GRAZING.** All other grazing should be excluded from primitive areas as rapidly as possible. The available feed is needed for pack-stock and wild life. Moreover, the grazing of animals in these high altitudes has very little commercial value or importance, certainly far less than the values destroyed.

## ADMINISTRATION

Mr. Marshall raised the question of

"3. The additional administration needed in the back country in order to insure that it is used properly and for any other reasons which may be desirable."

It is evident that proper administration of primitive areas will require a greater expenditure of funds than has been hitherto provided by the Forest Service. The committee feels that this increased expenditure is necessary and justified.

In this connection it is thought that a single annual fee, similar to the one collected in national parks, would be gladly paid by tourists and campers.

The most pressing need from the administrative point of view is for high country rangers or guards. Their most important duties will be in connection with trails and camps. They should see to it that trails are opened as early in the season as possible and maintained, particularly by provision for drainage before the fall rains commence. Their patrol districts should not be too large, so that they will be able to make frequent rounds of the various campsites.

The administration of all the High Sierra Primitive Areas should be uniform and this administration must be sympathetic to the purposes for which the area was set aside. At present it lies within four National Forests. The supervisors of these forests are generally burdened with many other problems of administration. Past experience indicates that they will generally find difficulty in devoting sufficient attention to direct activities in this area, particularly since the relatively short field season is also the season when hazard from forest fires is greatest in the foothill and middle forest belt.

Unless the administration of these high areas within the several National Forests can be closely coordinated by a forest officer specially delegated to this task by the Regional Office, then the administration of the area, or at least large portions of it, should be entrusted to a single Forest Supervisor who is not over burdened with other duties. This might be accomplished by utilizing the services of the Supervisor of the Inyo National Forest. This officer is not so heavily burdened with other problems during the field season. Many of his problems now relate to the very high country within the area on the east slope and a large number of those entering the wilderness area do so from this side. It is believed that a simple arrangement for administration without actual change of forest boundaries would suffice, although actual change of boundaries is not beyond the range of possibility.

## HUTS, FOOD SUPPLIES, AND EXPANDING USE

Mr. Marshall's questions included the following under this heading:

"4. The methods of making possible the use of this wilderness by low income groups and by young people who are not able to afford expensive packtrains.

"5. The pros and cons of hut construction where people merely carrying their sheets might find beds and bedding for the night and also a stove on which to cook their food.

"6. The pros and cons of building a few places in the middle of the wilderness where food might be obtained."

**HUTS.** Considering No. 5, it does not seem practical to build huts in the high country for the accommodation of travelers. Due to the short season and other considerations such service could not hope to be a successful venture for private capital. If such a plan were to be carried out it would require the backing of the government.

**SUPPLIES AND EXPANDING USE.** Considering Nos. 4 and 6, use of the wilderness by low income groups and young people who cannot employ pack-trains may be facilitated by:

(a) Making available a larger supply of burros at low rates of rental.

(b) Use of the modern type of light-weight sleeping-bag and camp equipment which weighs but a few pounds and can be easily carried, available at moderate cost.

(c) Building depots in the wilderness where food can be obtained presents the same difficulties as proposition No. 5 relating to huts. However, by the addition to those now available of two or three supply depots at road terminals which reach to the boundaries of the primitive areas, replenishment of food supply every few days would be possible and the load needed to be carried by back-packers thus lightened on a trip down the range. Or, such depots may serve as starting places to go out from and return to for supplies in the region served.

Going south from Yosemite to Kern Canyon such depots now are or could be placed as follows:

Merced Lake, Vogelsang Camp, Tuolumne Meadows (Yosemite National Park) all have hikers camps.

Gem Lake (Rush Creek) has supplies and lodging.

Reds Meadow (Devils Postpile) has supplies and lodging.

Mono Creek (Vermilion Valley) is a suitable and very desirable site for a depot to be placed.

Florence Lake is also a desirable depot site.

Parchers Camp (South Fork Bishop Creek) has supplies and lodging.

Upper Glacier Lodge (Big Pine Creek) could be made a supply point when new trail (see list of trails—Inyo National Forest) is made.

Onion Valley (below Kearsarge Pass) is now a starting point for packers.

Kings River Canyon (South Fork) will have supplies when new road into the canyon is completed.

Kern River Canyon and Bearpaw Meadow (Sequoia National Park) have camps; understand more are contemplated.

(d) We recommend that the Forest Service issue printed information concerning the recreational possibilities of the principal areas, similar to those published for the National Parks.

These should contain a general description and maps showing:

- (1) The trails and "ways through" according to the classification recommended for trails in this report.
- (2) Depots where supplies may be obtained.
- (3) Packers stations, with rates.
- (4) Bibliography on flora, fauna, geology.
- (5) Information on how to pack and camp, including camp catering and cooking.
- (6) Instruction on camp rules, including disposal of garbage and cans.

Other means for promoting more and better use of the High Sierra include newspaper publicity, magazine articles and lectures. Camp centers which will serve as points of departure for hikers and packers offer opportunities for instruction along all of the above lines. Informal talks, corresponding to the campfire talks of ranger naturalists in the National Parks, could be given in such places.

We suggest, however, the addition of practical talks by rangers and others with actual experience in camping and packing on such subjects as back-packing equipment, camp cooking and fire making (with small fires), the packing and care of burros. Such talks could be made very interesting, particularly if accompanied by actual demonstration.

#### WILDERNESS AREAS

Mr. Marshall inquired concerning

"7. The additional roadless areas which should be added to the existing High Sierra Primitive Area to give it its logical, ultimate extension, bearing in mind that this is one of the few really large roadless areas which it is still possible to save in the United States."

SIERRA NATIONAL FOREST. We approve of the proposed *additions* to the High Sierra Primitive Areas tentatively outlined by Mr. M. A. Benedict, Supervisor of Sierra National Forest, in his "Map of Recommended Areas," dated September 29, 1937. These additions include:

- (1) The headwaters of the North Fork of Kings River, including the Black Cap and Red Mountain basins, and a strip of high country extending to the Middle Fork of Kings River on the western side of the present Primitive Area.
- (2) A tongue extending westward from the present Primitive Area down the canyon of the Middle Fork of the San Joaquin River to its junction with the South Fork at Balloon Dome.

(3) Extension of the Mount Dana-Minarets Primitive Area westward in the northern region of the Sierra National Forest to include the high country on the southern slope of the Merced, San Joaquin Divide, joining the Yosemite National Park.

But we very positively object to the proposed *subtractions* outlined in the map above referred to, affecting:

(1) Mount Dana-Minarets Primitive Area. Relocating the boundary line as proposed excludes the Ritter-Minarets Range and its eastern lake basins including Shadow Lake and Lake Ediza, also a large part of the North Fork of San Joaquin River headwaters. The reason given for excluding this area, which has been within the Primitive Area boundaries for nine years, is that it contains mineral deposits offering possibilities of development. These deposits have been explored for the past 40 years and have not proved commercially valuable enough for successful operation. We feel that under the present set-up of Primitive Areas, mining development can be made where justified, and strongly recommend that the present southern boundary be retained and the issue of justifiable mining development receive consideration when and if it ever arises. This region is considered to be among the finest of High Sierra Primitive Areas.

(2) Middle Fork of Kings River. Withholding an area extending along the stream up to Cartridge Creek is objected to. It is extremely doubtful that power development will ever be valuable enough to warrant a dam site above Tehipite Valley. But if it should, the issue can be met when and if it develops. We recommend that the Primitive Area boundary remain as now located to include all the up-river region above the lower end of Tehipite Valley.

**MONO NATIONAL FOREST.** Proposed George Miller Primitive Area. This 73,000-acre strip on the eastern slope of the High Sierra Crest ties in on the north with the Emigrant Basin Primitive Area (Stanislaus National Forest) and the Mount Dana-Minarets Primitive Area (Mono National Forest) and extends south along the High Sierra Primitive Area (Inyo National Forest) to give continuous protection to the eastern slopes.

We feel that special study should be made of this proposed primitive area so that its boundaries may be established by the Forest Service as quickly as possible.

**INYO NATIONAL FOREST.** Expression of opinion has been requested by the Forest Service as to the advisability of excluding Gem Lake from the Mount Dana-Minarets Primitive Area, where a resort is now located. Since the lake is on the border of the area we feel that its retention within the primitive area should not be urged.

**SEQUOIA NATIONAL FOREST.** Kings Canyon. We favor the proposed change

of the boundary line of the Sierra Primitive Area in crossing Kings Canyon below Zumwalt Meadow instead of at Kanawyers.

**KERN PRIMITIVE AREA.** We favor the inclusion in a Kern Primitive Area of the entire High Sierra region south of the Sequoia National Park to the approximate southern boundaries of the Sequoia National Forest, and including the high region in the Inyo National Forest to the east, with a suitable connecting strip east of the Sierra Crest to tie this Kern Primitive Area to the High Sierra Primitive Area.

This area is one of the few extensive wildernesses and roadless regions remaining in the United States and we consider its preservation as a primitive area of great importance. We feel that there is no legitimate need or demand for roads in this area except from those who would destroy it as a wilderness.

The problem of preserving this whole area is now involved by the proposed Porterville-Lone Pine Road, already approved by the State Legislature, which is planned to traverse the heart of this region. We have reason to think the demand for this road is local and for commercial reasons, while opposition is general from sportsmen's groups and others. We have a suggestion to offer which might solve the problem and also meet a legitimate demand for a good highway crossing of the Sierra to connect the central San Joaquin Valley with the highway on the eastern side of the mountain.

At the meeting held December 4, 1937, the Board of Directors of the Sierra Club approved the following resolution:

"Moved that the Sierra Club go on record in recommending the substitution of the Bass Lake-Mammoth Pass route for a road across the Sierra in lieu of the proposed Porterville-Lone Pine route."

The arguments in favor of this resolution may be summarized as follows:

A good crossing of the Sierra is already provided for the southern San Joaquin Valley by the Walker Pass route.

The Bass Lake-Mammoth Pass road would satisfy a legitimate demand for a crossing from the central San Joaquin Valley region; from Fresno via the Yosemite Highway to Bass Lake; from Madera by roads connecting with that highway; from Merced via Mariposa and an improved road to Bass Lake or via Berenda and Raymond and the Fresno-Yosemite Highway. This route would also be favored by many in going from the San Francisco Bay area to the eastern side of the Sierra south of Mono Lake, and would be a favored route to take for Death Valley via Mammoth, Bishop and Lone Pine, thence over the new Lone Pine-Death Valley road.

A road over this route does not seriously invade wilderness country and does not pass through any of the present or proposed Primitive Areas. There is now a road over the summit to Middle Fork of the San Joaquin River at Devils Postpile, from Mammoth. Therefore that area is already invaded. The Sierra Crest breaks down and is less rugged at Mammoth Pass, affording an easy crossing, while the approach on the west side is gradual and avoids crossing high divides until the summit is crossed. This condition would make it possible to keep the road open a large part of the

year, in fact it could be made an all-year road. It would also be useful in the administration of the Sierra National Forest from North Fork.

The region traversed by such a road on the western slope of the mountains, outside of the Primitive Areas, offers favorable opportunity for use as recreational areas for the future, both for summer camping and winter sports.

The construction of a Bass Lake-Mammoth Highway should remove for all time any valid demand for any other road crossing the Sierra south of Tioga Pass. Such exclusion of other roads is of the greatest importance in order that these Primitive Areas may be preserved.

**OTHER PRIMITIVE AREAS.** Consideration and study should be given to other areas in the state which may be wilderness caliber, among them being the Salmon-Trinity Alps and Marble Mountains.

**PROTECTION OF PRIMITIVE AREAS.** The manner in which primitive areas are now created and are subject to commercial development makes the matter of future protection of their boundaries and areas a problem for special study. We stand ready to coöperate with other member clubs of the Federation of Western Outdoor Clubs and other interested organizations in the United States in supporting necessary Congressional action when such action has been decided upon and seems advisable.

Respectfully submitted,

JOEL H. HILDEBRAND, *President of the Sierra Club.*

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#### VACATIONING AT PARSONS LODGE

BY MR. AND MRS. EDWARD O. ALLEN

Many members of the Sierra Club are accustomed nowadays to think of the Tuolumne Meadows as a point of departure for more interesting parts of the Sierra rather than as a delightful place in which to abide. May we endeavor to dispel such a misconception? Our three weeks of camping there last summer have created an enthusiasm which we yearn to communicate to all those who love mountains in their various moods and would live primitively among them for a time, however brief. The Club's property surrounding the Soda Springs and Parsons Lodge offers many delightful camping spots. One has to carry water from the river, it is true, but perhaps something will be done soon about a piped supply.

At the Meadows (altitude 8600 feet) the surrounding peaks do not loom awesomely, but, lived with daily, assume unanticipated beauties and interest. The featureless slopes of Gibbs and Mammoth flame with the sunset glow in varying mood of cloud and breeze. Long lines of forest, rock, and meadow, with snow here and there, present unsuspected pictures to the contemplative eye. Peaks to the south—Cathedral, Unicorn, Echo—have individualities that are unique and everchanging. Many domes add to the interest of the mountain silhouette.

If you find yourself unable to take part in the pilgrimage of a "high trip," pushing on from one wonder to another, you will surely find a satisfactory substitute in the more intensive exploration of such a region as the Meadows. The peaks may not be so high or difficult; but they offer a good day's hike and the prospects from the summit are magnificent. Moreover, you may come across unheralded discoveries for which you do not have time on the *hegira* from camp to camp on a high trip.

For instance, there are the striking gorges, straight for long distances, in the basin between Unicorn and Cathedral. The traverse of Unicorn, Cockscomb, Echo Ridge, and Cathedral Peak is a hard day's climb, but presents an unsurpassed panorama. The view into Yosemite Valley from Echo Ridge is especially interesting; all the well known points of interest can be clearly discerned without field glasses. Then, there is the trail to Waterwheel Falls and Muir Gorge. In the opposite direction there is the hikers' camp near Vogelsang Pass, reached via Rafferty Creek or Ireland Creek trails. Young Lake and Mount Conness can be reached in one day's walk; the latter, of course, being a fairly long trip.

An automobile ride will take one to starting points for other wonderful hikes and climbs. Mount Dana is well known, but less so is the rocky but delightful climb up the east face of Conness from Slate Creek, which is reached by a road running three miles north from Tioga Pass. Parker Peak, in a lonely region a couple of miles south of Bloody Canyon, offers one of the finest views in the Sierra; you can park your car on the Tioga Road where the trail to Mono Pass starts and do the trip in a day. By driving to Lake Tenaya, a moonlight hike to Clouds Rest will take only a few hours, and Mount Hoffmann and Tuolumne Peak are nearby. From Tenaya Lake to Yosemite is about twelve miles by trail, affording fine views of the stupendous faces of Half Dome and Clouds Rest.

Your joy in such a vacation does not end with the scenery. Parsons Lodge is always there as a shelter in bad weather, as a rendezvous for friends, as a gathering-place about the generous fire after the sun sets, as relief in any emergency. What delightful meetings we had there, arranged by the jovial and efficient host, Albert Duhme! His ingenuity has transformed the previously gloomy Lodge into a place of cheer and comfort. And do not forget the wonderful soda spring, whether for sheer delight in superb waters or—if you be dietetically speculative—to alkalinate your depleted systems.

One event of our stay was such a high spot for the twenty-three campers at Soda Springs that it must be recorded as an example. At the invitation of a gentleman sojourning there, we all assembled one evening in the Lodge for a community Italian dinner. Signor Olivieri, with masterly skill, cooked ineffable spaghetti and zucchini omelets in great iron kettles swung on cranes and in gigantic frying pans in the generous fireplace. Each group of campers brought a contribution to the festive meal—huge bowls of salad, fruits, bread and butter, coffee, and candy. Pine cones and coniferous foliage made a beautifully decorated board. Songs, stunts, and games held

us by the fire until an hour late for campers—truly an evening of fun and good fellowship in the Sierra Club tradition.

#### MORE NOTES ON BIGHORN SHEEP ON MOUNT SAN ANTONIO

BY I. RAYMOND MINNICH

An item, titled "Bighorn Sheep in the San Gabriel Mountains," printed in *Sierra Club Bulletin*, 1937, 22:1, page 111, describes an observation by William Rice of four sheep near the Sierra Club Ski Hut trail on Mount San Antonio. It might be of interest to add some further information on the occurrence of Bighorn in this vicinity. As a member of a mountaineering club known as the "Baldy Bighorns," with a cabin near the Harwood Lodge in Manker Flat, I have had the good fortune personally to observe more than twenty sheep in this vicinity in the last few years. Other members of the club have also seen several bands, until the total number we have seen ranges between thirty and forty. It is interesting that the first sheep I happened upon (1930) were on the little flat where the present Sierra Club Ski Hut is located. A band of six rams was drinking at the stream. They ran off rather leisurely to the southwest where they took up a position near some large boulders and watched my continued ascent of the Big Slide. A year later I was fortunate in being able to approach within fifty feet of four magnificent rams near the summit of Iron Mountain. During a solo ramble in Deer Canyon, on the rugged south face of Cucamonga Peak, I sent a group of five sheep scurrying over a ridge to the east and within thirty minutes was surprised to see three more climb over a ridge to the west. All signs indicate that this craggy region is well populated with Bighorn.

On August 30, 1936, I was treated with the rare sight of ewes and lambs resting on a small shelf of a rocky ridge overlooking Manker Flat. The lambs did not appear to be more than two or three weeks old, but proved quite nimblefooted when the ewes decided that I was too close to their hideout. These lambs apparently got their start in life near the waterhole at the head of Snowcrest Slide, within a mile of the Harwood Lodge.

It is to be hoped that these beautiful animals will be able to perpetuate themselves in this region.

#### "SKEE" vs. "SHEE"

BY LINCOLN HUTCHINSON

Some twenty-five years ago I was a guest at a dinner in London. The conversation turned to winter sports. I made some remark about "skees;" whereupon a fellow guest, an Englishman, responded with something about "shees." He put just enough emphasis on the word to make it very obvious that he wished to put the American visitor right.

Before that time I had played about on skis more or less in Switzerland and at home. I had heard many people use both pronunciations without

getting greatly excited as to which was correct. But I am a rather cantankerous individual, and this public correction got my dander up. I said nothing at the time, but I determined to follow up.

I tried dictionaries and encyclopedias and found confusion. The great *Encyclopedia Britannica*, in its copies sold in England, gives "shee" only. Its copies for American consumption give "akee" alone. Most English dictionaries, including the *Oxford*, insist on "shee," though I found an English acquaintance who remarked cynically "if the *Oxford Dictionary* says 'shee,' that is enough to convince me that I ought to say 'akee'." Nearly all American dictionaries give us no authority for anything except "akee." I found a Norwegian gentleman, Professor of English at the University of Upsala, who told me that he had never heard the pronunciation "shee" in Norway except in the province of Telemark, though all Scandinavians give an initial "sk" a slightly sibilant sound to which the English "sh" is a crude and incorrect approximation.

Still in doubt, I talked it over with an old friend of mine in London. We decided to try another tack. There are many English words of Scandinavian derivation. A goodly number of these come from Swedish, Norwegian, or Danish roots beginning with "sk" or "sc." What has the English language through the centuries, done with such adopted words? It occurred to us that we might get more light on the proper pronunciation if we were to round up all such words and see what usage has done to them.

We assembled all the standard English and American dictionaries and dug out every word we could find of Scandinavian derivation beginning with "sk," "sh," or "sc." There are between two and three hundred of them. We discovered that *without a single exception* the English language, in taking them over, has done one of two things with them: it has either accepted an approximation to the sibilant sound and changed the spelling to suit, or it has kept the spelling and changed the sound.

A single illustration will suffice. Anyone interested can readily find others by consulting the dictionaries. Our word "ship" comes from the Scandinavian "skib." We have kept an approximation to the sound and altered the spelling. But the man who runs the ship (from the same root) is the "skipper." We have kept the spelling and changed the sound.

Furthermore, the word "ski" itself is of Icelandic origin. The root is "skidh." This long ago passed into English, apparently through the Danish, and is in daily use in our word "skid." It has kept the spelling and altered the sound.

So I propose to continue to say "akee" whether my foreign friends like it or not. And it doesn't worry me much if they prefer to continue with "shee," though I predict that if they do they some day will change the spelling. But it does still rile me a little when they talk of "shees," or "sheed," or "sheeing," for there are no such terminations in the foreign language which they are affecting to imitate.

9 Canyon Road, Berkeley  
January 17, 1938.

## NOTES ON SOME EARLY ILLUSTRATIONS OF SKIING

BY FRANCIS P. FARQUHAR

A copy of "The History of Lapland," by John Scheffer (Latin, *Shefferus*), published at Oxford in 1674, recently came into my possession. In it are two interesting illustrations of skis and skiing, which are reproduced in this number of the *Bulletin*. On the engraved title-page a Laplander is shown holding a pair of skis and a vicious-looking barbed pole. The other illustration shows the Laplander on his skis, with a pole in one hand and a cross bow over his shoulder. In both illustrations one ski is clearly shown as shorter than the other. That this is not a poor attempt at perspective drawing is disclosed by the text. According to Scheffer, it is everyone's opinion that one shoe must be longer than the other, the longer being covered with resin or pitch, the shorter plain.

Scheffer's description of skis occurs in a chapter on "Weapons and Other Instruments of Hunting." He describes the cross bow, mentions guns, and says that spears are used in hunting bears. The last remark seems to explain the spear in the engraving. Hunting bears with a seven-pronged spear, on skis, suggests new thrills for our ski-mountaineers.

The way of going on skis, according to Scheffer, is this: "They have in their hand a long staff, at the end of which is a large round piece of wood fasten'd, to keep it from going deep into the Snow, and with this they thrust themselves along very swiftly. This way of running they not only use in plain and even, but in the most rugged grounds, and there is no Hill or Rock so steep, but with winding and turning they can at last come up to the top, (which Pope *Paul* the Third could not believe) and that which is a greater Miracle will slide down the steepest places without danger. These shoes they cover with young *Rain-deers* skins, whose haire in their climbing run like bristles against the Snow, and keep them from going back. . . . And this is the first instrument of hunting, which they use as well in other businesses in winter time, for they can pass no other way over the Snow, at which time they can outrun any wild beast."

Scheffer discusses the descriptions and representations of skis found in the works of other writers namely, Frisius, Wormius, and Olaus Magnus. I have not been able to get hold of the works of the first two, or even to identify them. The great work of Olaus Magnus, however, *Historia de Gentibus Septentrionalibus*, is to be found in one form or another in the larger libraries. Prompted by the references in Scheffer, I sought a copy and by good fortune obtained an especially attractive edition, published by Christopher Plantin, in Antwerp, 1558. Although it is an "epitome," or abridgment of the folio editions, it contains a number of delightful woodcut illustrations not found in some of the latter. Four of these woodcuts are selected for reproduction here. (Plates xxvi-xxix.) Their quaintness makes up for their deficiencies as reliable representations of skiing. Scheffer has something to say on this subject. "That which is often in *Olaus Magnus*," he says, "is a meer fancy and figment of an Italian Painter, that could not understand what these shoes were, but by describing them

like long wooden broags turning up with a sharp point before: which is very idle, because the foot goes into it at the hinder part, . . . ; for if the place of the foot were there, it could not endure so great a weight before it, or effect that for which this shoe was first invented: for they must tread firm upon the Snow, which they could not do if all the weight lay at one end; but when 'tis in the middle, that which is before and behind will keep the foot from sinking in."

Notwithstanding this slight deficiency, the skiers portrayed by the "Italian Painter" seem to be getting along very well—save one, who is in what is doubtless a characteristic position, but dangerously close to the galloping reindeer. The family pack-trip on skis, shown on Plate xxviii, is certainly a masterpiece. Scheffer, however, says the baskets are faked—again the work of the "Italian Painter."

The Huntington Library, San Marino, California, has a copy of an English edition of Olaus Magnus, "A Compendious History of the Goths, Swedes, and Vandals," London, 1658. I have not yet had an opportunity to examine it, but from a photostat of one of the pages the following passages are quoted by permission of the Library: "Two sorts of men are found in these places, that run Races for Wagers most swiftly, . . . The first is the *Wild* or *Laplander*, because upon crooked Stilts, or long Stakes fastened to the soles of his feet, he transports himself upon the Snow in Dales and Mountains, in a dangerous way, by a winding and arbitrary motion; and he doth it with a most perfect Art, whether he be to encounter with adverse accidents, or he doth it for sport in Hunting, . . . or whether he undertakes this for a prize or glory."

To the Laplander and his "winding and arbitrary motion."—*Ski Heil!*

## MOUNTAINEERING NOTES

### 1937 OUTING MOUNTAINEERING

BY BRAEME E. GIGAS

Climbing conditions in Glacier National Park, Montana, proved somewhat different from those to which our climbers are accustomed among the firm granites of the Sierra. Hand- and foot-holds were embarrassingly insecure, and more than once climbers were forced to rely on a "fifth point." The materials that form these very old, slightly metamorphosed sedimentary rocks were laid down in a quiet inland sea as layers of mud and fine sand. After subjection to heat and pressure, crustal movements of the earth bared them to the elements, and as a result there were found mudstones, sandstones, and limestones. With one exception, no fossils were found in these rocks by the climbers; but mud cracks, ripple marks of the ancient beach line, raindrop impressions, and casts of salt crystals were abundant. Around Lake Louise and near Field, B. C., the rocks are much younger and fossils are present; but climbing conditions are poor, the rock weathering into plates and shales that give way most unexpectedly under one's weight. Selkirk rock, mainly quartzite, is more resistant, and after three weeks of shales and mudstones it was a welcome relief to encounter rock that resembled the granite of the Kings and Kern in color, firmness, and weathering. Fossils were absent, but glaciers, with their crevasses, seracs, and moulins, held the interest of the geologically minded, as indeed of all.

#### GLACIER NATIONAL PARK

*Sperry Glacier.* Reached from camp near Sperry Chalet and explored July 13 by Howard Gates and Norman McKee. A mountain goat, first of many seen on the outing, enlivened the trip.

*Glacier Basin—Lake Ellen Wilson Divide.* July 14, Richard M. Leonard and Jack Riegelhuth passed through the natural window seen from the Chalet.

*Mount Logan.* Climbed July 16 by Norman Clyde (leader), Kasson Avery, June Pierce, Helen Simpson, Richard Cahill, Edith Hurtgen, Beth Mason, L. A. Gage. Blackfoot Glacier was crossed, splendid views had of Harrison Glacier.

*Blackfoot Glacier.* Thoroughly explored July 15 and 16 by parties led by Leonard, Riegelhuth, Oliver Kehrlein, and by Thomas Hills, Professor of Geology at Vassar College. On a ledge recently exposed by the retreating ice-front were found fossil remains of a reef of algae, estimated age 600 million years.

*Going-to-the-Sun Mountain.* Traversed July 18 by Clyde and Kehrlein (leaders), Margaret Place, Helen Simpson, June Pierce, Beth Mason, Ann Kriefseisen, Thomas Polhemus, Gale Siegel, Warren Breed, John Greenwood, Braeme Gigas, Edward Hall, Cahill, Gage, Avery. Ascended, via Sexton

Glacier trail, Siyeh Pass, and the northwest face. Descended, via the west face and Reynolds Creek, to camp at Upper Saint Mary Lake.

*Goat Mountain.* Scaled July 19, via the south face, by Breed and Don Smith.

*Gem Glacier.* Reached July 20 by Florence Dutton, Hall, Gigas, from the Logan Pass trail via the first col in the Garden Wall north of Mount Gould.

*Garden Wall.* July 20, parties too numerous to mention climbed to the top, enjoying unparalleled views of Grinnell Glacier and Swiftcurrent Valley.

*Grinnell Mountain.* The first known traverse of this peak was accomplished July 21 by Clyde and Gates (leaders), Jane Elston, Beth Mason, Edith Hurtgen, Margaret MacLean, Louise Hewlett, Nancy Jones, Smith, Polhemus, Gigas. Ascent made from Granite Park via the Garden Wall; descent, via south face and Grinnell Lake, to Josephine Lake.

*Mount Wilbur.* Leaving Josephine Lake July 23, Clyde and Breed climbed this major peak, via the eastern shore of Iceberg Lake, the northeast shoulder, and a crack through the diorite on the south face. They returned to Ptarmigan Lake. Clyde's first ascent is recounted in *S. C. B.* 1924, 12:1, pp. 4-6.

*Mount Cleveland.* July 26, five parties signed the Sierra Club register placed in 1924. Leaders were Clyde, Leonard, Kehrlein, Riegelhuth, H. S. Kimball. Others were H. B. Richardson, Ben Fish, William Lucke, Robert Thompson, H. M. Walters, Jane Elston, Eleanor Ginno, Edith Hurtgen, Kitty Laughlin, N. J. Laughlin, Gage, Cahill, Gates, Polhemus, Gigas. Starting from Indian Pass Lake, the parties ascended the highest mountain in the Park from the southwest. The summit bears striking resemblance to Mount Whitney, being a gently sloping, nivated platform several hundred acres in extent. Cliffs and ledges of the west face were descended, a small stream followed to its confluence with Little Kootenai Creek, thence to Gothaunt on Waterton Lake. Heavy timber and patches of devil's club retarded the return trip.

*Chapman Peak.* Climbed July 29 by Polhemus.

*Boulder Peak.* While a large group of side trippers were enjoying the wild country in the northwest portion of the Park, a party led by Dr. Harold Crowe reached this peak July 30 from camp above Hole-in-the-Wall Falls. Others were Mrs. Crowe, Nancy Jones, Louise Hewlett, Henry Chamberlain.

*Kinnerly Peak.* Climbing in Glacier National Park reached a climax July 30 with presumably the first ascent of this peak in the little known Kintla Lakes district. Clyde, Hall, Cahill, Gigas, reached the horseshoe-shaped knife-edge comprising the summit and erected cairns on the three highest points—an 18-hour climbing day from camp above Hole-in-the-Wall Falls.

#### CANADA

*Lake Louise District.* Stormy weather preventing assaults on the higher peaks, members made trips to Victoria Glacier, Moraine Lake, and Valley of the Ten Peaks. Many parties climbed the Big Beehive, securing extensive views of Lake Agnes and occasionally Victoria, Lefroy, and The Mitre.

*Mount Wapta.* August 3, Clyde and Kehrlein took a party to the summit,

via Takakkaw Falls and Burgess Pass. In the party were Elsie Hart, Esther Firth, Gates, Hall, Gigas. The tin can register indicated a first ascent by Edward Whympere, famous English climber, in September, 1901.

*Takakkaw Falls.* August 3, a well seasoned group made a 23-mile trip into the President Range, via Takakkaw Falls, 1200 ft. high, and the Yoho River, returning to Field by Summit and Emerald lakes.

*Illecillewaet Glacier, Mount Abbott, Balu Pass.* Assisted by Stacy French (Sierra Club and Harvard Mountaineering Club), Kehrlein and Richardson took a large party on an exploratory trip to Illecillewaet Glacier. On two successive days parties climbed Mount Abbott and were rewarded by far-reaching views of Asulkan Glacier and the Selkirk Range. August 4, a ranger-conducted group crossed Balu Pass and enjoyed the sight of the incomparable ice fields on the Hermit Range.

*Mount Sir Donald.* As a climax to the entire trip, 14 climbers struggled for two stormy days, August 4 and 5, to ascend the "King of the Selkirks." Success met but two, Norman Clyde and Edward Turner. Bitter weather and inadequate equipment stopped the others.

This was the last day in the field. That evening the train, wending its way southward past the shores of Lake Windemere, crossed the International Line. Two more days, and the party reached Oakland, the end of the journey and the finish of a memorable Sierra Club Outing.

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#### SOUTHERN CALIFORNIA ROCK-CLIMBERS' PALISADE TRIP

BY JAMES N. SMITH

The Palisade region was visited July 3-5, 1937, by twenty-one members of the Southern California Rock Climbing Section of the Sierra Club, including seven girls who did their own back-packing. Camp was made at Third Lake, on the North Fork of Big Pine Creek, six miles from the end of the road. July 3, Dick Jones and May Pridham climbed Temple Crag from the saddle to the E. July 4, Glen Dawson, Muir Dawson, La Vere Daniels, Wayland Gilbert climbed Mount Sill by the North Face. Two parties, consisting of Bob Brinton, Dick Jones, Mary Jane Edwards, Howard Koster, Nelson Nies, Jim Smith, in attempting North Palisade by the Northeast Face from Palisade Glacier, reached the notch to the right of the highest peak, but were turned back by lightning. Other parties on Thunderbolt Peak and Temple Crag were also unable to complete their climbs. Although climbing was hindered by storms, the trip was highly successful and a similar trip is planned for this summer.

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#### MOUNT WHITNEY—EAST FACE

BY ARTHUR B. JOHNSON

*Original Route.* The only ascent of the route during 1937 was the ninth ascent, made July 24, by Dick Jones and Adrienne Applewhite, using both the Eichorn and Fresh Air traverses.

*Sunshine-Peewee Route.* A new route up the East Face was pushed directly up the face of the great buttress from behind the second tower of the original route, meeting it again in the blocks just under the summit. The first pitch after passing the tower has two pitons. The third pitch has one, placed on the attempt in 1936. One more piton was used on the first ascent on the pitch passing the Peewee, a huge block, about two-thirds of the way up the buttress. A strong party can make the ascent without using any of the pitons for direct aid. The first ascent, September 5, was led by Bob Brinton and Glen Dawson on one rope, followed by Dick Jones, Howard Koster, Muir Dawson, on the second rope. Some new snow on the high ledges made the going delicate in places. They returned to camp at Mirror Lake by the trail. The second ascent, September 19, by Arthur Johnson and Bill Rice, was made in a cold high wind but with dry rock. Only the pitons in the first pitch were used, and those for protection only. They left East Face Lake at 6:30 and were on top at 10:00, to enjoy a wonderfully clear view for thirty minutes before descending. They came down by the same route, making the first round trip, arriving at the lake by 12:30.

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#### THOR PEAK<sup>1</sup>

By ARTHUR B. JOHNSON

One new climb in the very difficult class was made on the south face of "Thor," a peak with a 1500-foot face, rimming Ibex Park on the north. September 4, Jim Smith, Howard Koster, and Arthur Johnson left their camp at Mirror Lake after a late breakfast for a little practice before the projected attempt on the Sunshine-Peewee Route the following day. They contoured E. onto the slopes of "Thor," and up into a crack between the main peak and a pinnacle standing to the W. Two pitches up the crack they turned E. again onto a series of ledges leading out and up into another crack, which in turn led up to a high shelf, called the Pink Perch from its reddish coloring. Smith and Johnson alternated in the lead. From the Pink Perch they descended a crack leading down to the E. A hundred feet down, a possible route up appeared through a vertical crack a few feet out on the face. Two or three delicate steps out into the crack and two pitches up brought them to a shelf behind a gendarme. The lead was swung from Johnson to Smith for two tries at the next pitch, then to Koster, who, after two attempts on a very smooth high-angle chute overhung by a block pinching into a squeeze crack above, turned to the right and pushed up a very delicate face-climb for fifteen feet into easier going for several feet to finish a 70-foot lead.

After another pitch up fine high-angle block climbing, the route led W., back high above the Pink Perch, into a series of ledges which led up into a

<sup>1</sup> The name of "Thor" has been proposed for the peak lying just north of Ibex Park. It is misprinted on the U. S. G. S. Mount Whitney quadrangle as 13,301; the contours show it to be 12,301.

recess under a ten-foot wall of cornice blocks. A cairn a hundred feet or so E. of the summit marks the end of the climb dubbed "Satan's Delight."

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#### WHITNEY BY THE EAST BUTTRESS

BY GLEN DAWSON

Labor Day week-end, 1937, marked the seventh annual Sierra Club trip to Mount Whitney. Dick Jones and I wondered if this time we would complete our "Sunshine Route," midway between the usual East Face Route and the Mountaineers' Route. At 5 o'clock, September 5, five of us left Mirror Lake and went up the steep, trailless canyon, with our first objective the right side of a prominent pinnacle seen on the skyline from the lake. Crossing Pinnacle Pass at 6:15 we clambered down steep talus, across part of the North Fork of Lone Pine Creek, and up to the plateau that holds East Face Lake. Here Mount Whitney appears in its greatest grandeur. "The northerly section of the east face stands forward from the remainder in a great square abutment." The original East Face Route starts up this abutment or buttress, then goes left by a large ledge. Our plan was to continue up the buttress—a more direct route.

About 500 feet above East Face Lake, Dick Jones, Howard Koster, and Muir Dawson put on the rope and went around the tower by going up it and to the right. Robert Brinton and I made the exposed Eichorn Traverse to the left of the tower, to meet the others at the col behind. We went directly up a small arête, using two pitons placed the year before. With Brinton leading we went up a pitch just N. of the buttress, then, on excellent holds, up the steepest portion of its crest. One of the most distinctive features of the East Face is a hanging rock, which, seen in profile from the trail below Whitney Pass, looks like a huge insect crawling up Mount Whitney. Our route led so close up the right of this rock that we could touch it. We then went up a series of cracks to the left of another block, and finally reached less difficult pitches. Near the summit we unroped. We arrived on top at noon, three and one-half hours after roping, and were greeted by many of our friends—more than 100 persons having come up the trail. The East Buttress is slightly more difficult than the usual East Face Route; both are interesting routes for experienced climbers.

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#### SKI ASCENTS ON WHITNEY CREST

BY RICHARD M. JONES

Bob Brinton, Muir Dawson, Bill Rice, Fred Stoffel and I left our car at Hunter's Flat, April 8, 1937, and, skiing to Ibex Park, improvised shelter from an oncoming storm by assembling two screen doors, a wheelbarrow and our own storm canvas. Under this crude protection we spent fourteen hours waiting for the storm to clear. The morning of April 9, Brinton, Dawson, and I crossed and climbed to the right of Mirror Lake, many times being

tempted to turn our skis downhill and schuss the steep slopes that flattened out on the frozen lake. Passing the base of Mount Muir, we turned up the east slope of Whitney Pass. Powder-snow two or three feet deep made kick turns difficult and created some avalanche hazard. By mid-day we stood on the pass (13,500) and viewed once again the white heart of the High Sierra. If we had made an earlier start we might have continued toward Mount Whitney with very little more difficulty. However, we made ready for the descent, and, with a last look at the beautiful white panorama across the Kern, pointed our skis downward. Turn after turn, interspersed with an occasional cartwheel, brought us all too soon to the foot of the steep slope, where, on a large block of granite, we basked in the sun and finished our lunches. Returning to camp over varying kinds of snow—all fast—we were thankful that our skis had steel edges.

April 10, Rice and Stoffel climbed to the top of the pass by the route of the summer trail, which was much shorter than our previous morning's ascent. Rice left his skis at the pass and climbed Mount Muir. That night around our campfire we recalled past ski trips to Kearsarge Pass, Bishop Pass, Dunderberg Peak, and the Mammoth Lake region, and voted this trip among the best.

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#### WHITNEY PASS AND AN ASCENT OF MOUNT WHITNEY IN WINTER. 1927-1929

BY DR. F. ZWICKY

First ascent of Whitney Pass on skis from Lone Pine. 1927.—We are three: Dr. F. Zwicky (C. A. S., C. A. F.), Dr. J. Mattauch (D. Oe. A. V.), Dr. R. Kennedy. February 26—We leave Kennedy's car below the entrance of Lone Pine Canyon and arrive at camp, at about 10,500 feet, at 10 A.M. We ski around during the day and make ourselves comfortable in camp. February 27—We leave camp at about 2 A.M. On the steep slope above Mirror Lake the snow is exceedingly deep and we lose much time. Then rapid progress is made to the foot of Whitney Pass. On the slope up to Whitney Pass lies powder-snow five to seven feet deep. Top of Whitney Pass at about 10 A.M. All morning long there is a fearful wind and the weather turns from good to bad within an hour. It begins to snow and we decide to turn back. We have a fine descent on skis from Whitney Pass to Hunters Flat (about 8500 feet elevation), where we camp for the night. Next day, back to Pasadena.

*Attempt to climb Mount Whitney on skis from Lone Pine Canyon, via Whitney Pass. 1927*—The participants are: Dr. F. Zwicky (C. A. S., C. A. F.), Dr. J. Mattauch (D. Oe. A. V.), Kem Weber. March 27—We are at the entrance of Lone Pine Canyon at 3 A.M. We arrive at our former camp about 10 o'clock and spend the rest of the day there. March 28—At 2 A.M. the snow is exceedingly hard. I have only one pair of crampons, which I give to Weber. He gets to the foot of Whitney Pass half an hour before us, because Mattauch and I are obliged to cut some steps on the steep icy slope above Mirror Lake. The slope up to Whitney pass is frozen stiff. Weather beautiful, temperature about minus twenty degrees centigrade. From Whitney Pass

to a point near Mount Muir all the slopes are covered with much snow with an icy crust. We have to chop many steps and it takes us about four hours for the stretch. Weber becomes mountain-sick and, in spite of the most beautiful weather, we are obliged to turn around at 10 A.M. We descend the steep slope between Whitney Pass and Mount Muir. The descent on skis is very fast and we drive back to Pasadena on the same day.

*First ascent of Mount Whitney on skis directly from Lone Pine Creek, 1929.*—The party: Dr. F. Zwicky (C. A. S., C. A. F.), Dr. H. M. Evjen, Dr. F. Rasetti (C. A. I.). March 20—Departure from the entrance of Lone Pine Canyon is at 6 A.M. We reach camp about noon. March 21—We leave camp at 2 A.M. and make rapid progress, because the snow is very pleasant. We do not ascend [old] Whitney Pass this time, but reach the ridge over the steep snow-slope halfway between Whitney Pass and Mount Muir. The snow on the trail to the top is deep and frozen hard in spots. We reach the summit of Mount Whitney at about 10 A.M. and stay there over two hours. An airplane, apparently coming from Lone Pine, spots us on the top and circles around the summit twice. We can see the pilot wave to us. We inscribe our names in the Sierra Club book with burnt matches, since no pencil is to be found in the box. Descent on skis from the ridge to the camp is very rapid and beautiful, since the snow on the surface is slightly softened. The temperature in the early morning was minus thirty degrees centigrade. Weather beautiful throughout. We camp another night in our place at 10,500 feet, descend the next day very rapidly on the skis over slightly wet snow, and drive back to Pasadena.

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### "JOE DEVEL'S PEAK"

BY COMMITTEE ON MOUNTAIN RECORDS

Since the 1934 edition of Richard M. Leonard's *Unclimbed (?) Peaks of the Sierra Nevada*,<sup>2</sup> energetic members of the Sierra Club have done their best to shorten subsequent editions by reducing the number of unclimbed peaks. About half of these coöperative ascents reveal previous climbs, evidenced by cairns or fragmentary written records. Rarely are more than one or two earlier ascents indicated for any summit. Peak 13,328, four miles south of Mount Whitney, was "unclimbed-?" until July 7, 1937, when Owen L. Williams went up the easy southeast arête. He found records of 32 persons, all of whom had made the ascent by 1908. A Wheeler Survey party, en route to Mount Whitney, made the first ascent in 1875. The Committee on Mountain Records is indebted to Owen Williams for a comprehensive report of his extensive High Sierra climbing last summer. Following are notes from Williams' report on Peak 13,328:

September 20, 1875—Climbed by a party of the Expedition of 1875, Explorations and Surveys West of the 100th Meridian; named "Joe Devel's Peak," after a member of the party: Francis Klett, W. A. Cowles, F. Kamp,

<sup>2</sup> Now embodied in *Mountain Records of the Sierra Nevada*, Sierra Club, 1937. 115 pp. (Mimeographed). A few copies are still available to interested persons. Address, Committee on Mountain Records.

Hampton Hutton, Joseph Devel, John Kimler, Dr. J. T. Rothrock, (?) Henrique.

August 19, 1880—"The following members of the State Engineer Department came up on this peak on the above date, being under the impression that it was Mount Whitney. They brought up an engineers' level for the purpose of ascertaining which was the higher peak, Whitney or Fisherman's. Setting up the level on rock on which the monument is built and sighting to both places they concluded that the latter is the higher<sup>2</sup>—although the inst. being lower the conclusion may not be correct. H. B. Choice, C. H. Congdon, J. M. Johnson, Jr., R. Seymour, Thos. East. A stake branded 'S. E. D. Aug. 19, 1880' is left at the Monument." The stake is still there.

July 30, 1883—"The following party ascended this peak the above date under the impression that it was Mount Whitney. Wm. Carden, C. M. Vrooman, L. E. Chittenden, C. A. Roper, J. M. Jameson, Henry J. Carver, Jennie Jameson, Ella C. Roper, Sam'l Allen."

July 17, 1887—Maj. G. B. Pickett, C. S. Vance, B. H. Vance, George C. Coleman, Lewis H. Stark.

August 11, 1892—D. S. McKay, J. F. G. McKay, T. J. Gilliam.

July 28, 1904—H. M. Hall.

July 23, 1908—George R. Hall.

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#### SOME CLIMBS IN THE SIERRA IN THE SUMMER OF 1937

BY CHESTER VERSTEEG

*Tinemaha Mountain.* (Peak 12,543, two miles SE. of Birch Mountain. *Bishop Quadrangle*)—As seen from Owens Valley, it appears as a striking massif. There is no trail up Tinemaha Creek. Timberline is very low, and camp was made at 8400 feet. The latter part of the climb from the NW. was up a steep 1700-foot cirque-wall, breached near the crest by a short chimney. A half-mile of easy going finished the climb, apparently a first ascent July 1, 1937. *Peak 12,811.* (Two miles SE. of Whitney)—Climbed, via most northerly of three chimneys that rise close together on the SE. wall, July 10. This was the second ascent; the first was by Norman Clyde about 1930. *Peak 12,301.* (N. of Mirror Lake, at head of Lone Pine Creek, shown on map erroneously as 13,301)—A fourth ascent, July 11. *Langley.*—A family climb, July 27, with Mrs. Versteeg, Betty (age 13), and Janice (age 9). Mrs. Versteeg (then Miss Lillian Ferguson) and I had climbed this mountain together eighteen years before. "*Joe Devel's Peak.*" (13,328 feet; see p. 107)—Climbed July 29.

*Le Conte.*—Climbed with Mrs. Versteeg, August 9, from camp at 11,200 feet near head of Rock Creek. From the top of a mile-long chute W. of the Crest, we traversed N. along a band of reddish porphyry about two hundred feet below the summit to the second chimney on the N., where our route

<sup>2</sup>This nomenclature reflects the efforts made for a time to keep Whitney's name from being fixed to its original location, the highest peak, and to fasten it upon "False Mount Whitney," now known as Mount Langley. (Farquhar: "The Story of Mount Whitney," S. C. B., 1929, 14:1, p. 51.)

joined that from the N. A crack at the far NE. corner of the chimney led us to the summit. Mrs. Versteeg is the first woman to make the ascent. A complete record of ascents, so far as known, is as follows: Aug. 14, 1895, attempt by Carroll and Austin, ended 150 feet from summit (*S. C. B.*, 1896, pp. 325-326); June 1925, Norman Clyde, first ascent (*S. C. B.*, 1926, p. 305); Aug. 27, 1925, Norman Clyde; Aug. 3, 1928, Albert Everard Gunther, Richard L. L. Oertel (British climbers); July 27, 1931, Norman Clyde; July 2, 1934, Ted Waller, Glen Dawson; Aug. 30, 1934, Arthur Johnson; July 1936, Oliver Kehrlein, Tyler Van Degrift, Chester Versteeg; July 1937, Bill Blanchard, Cary Leech, Hubert North ("The Mount Hood Climbers"); July 22, 1937, Nelson Nies, Muir Dawson; Aug. 9, 1937, Chester Versteeg, Lillian Versteeg.

#### THE MINARETS IN JUNE

BY CARL P. JENSEN

Following our climbs in the Palisade region, described on pages 33-35 of this number, Howard Gates and I spent a week in the Minaret-Ritter region. We established base-camp near Iceberg Lakes and in the next few days made what we believe to be the earliest seasonal ascents of Clyde, Michael, Eichorn, and Rice minarets, and perhaps the earliest of Ritter and Banner. We also made what is, so far as we can ascertain, the first ascent of a double summit north of "The Notch." (Shown on map and views elsewhere in this number as "E.") After one of our climbs we were caught by a cold moisture-laden wind and, with the way obscured, were forced to spend a foodless, fireless, waterless night in a recess of the mountainside.

#### LYELL IN A DAY

BY DAVID R. BROWER

Stuart McKelvey, former Fresno State College student employed in Yosemite, decided after due investigation of routes and conditions to attempt the round trip from Yosemite Valley to Mount Lyell (13,096) within one calendar day. He gave details of his plans to a few friends. One of them wagered ten dollars with McKelvey that it was impossible. Perhaps even more incredulous, I was on hand shortly after midnight July 22, 1936, to see McKelvey off. Following are the log and statistics of this remarkable *tour de force*:

12:03 A.M., left Happy Isles. Via Merced Lake Trail, to Vogelsang Camp (breakfast of sliced peach and mush); then to Ireland Lake, contouring western wall of Lyell Fork Canyon to glacier; 12:30 P.M., summit of Northeast Peak of Mount Lyell, in error; 1:30, arrived at summit of Mount Lyell. Left at 1:45; 5:30, Vogelsang Camp ("supper" of sliced peach). Left at 5:45; 8:30, passed Merced Lake; 11:11, passed top of Nevada Fall; 11:56, reached Happy Isles, with seven minutes to spare! Distance, 64 miles (20 off-trail, 1 on glacier); Climb, 12,000 feet vertical gain, including 800 feet



LAKE McDONALD, GLACIER NATIONAL PARK

By Charles S. Webber



SIERRA CLUB PARTY AT GRINNELL LAKE  
GLACIER NATIONAL PARK  
By Charles S. Webber

SIERRA CLUB PARTY AT GRINNELL LAKE  
GLACIER NATIONAL PARK

By Charles S. Webber

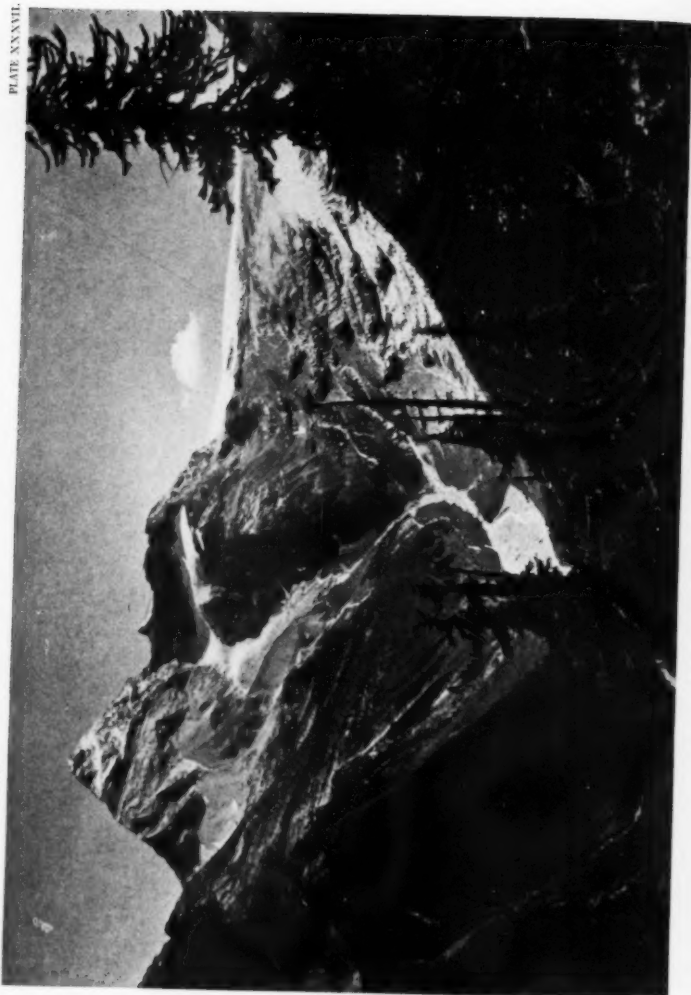
SIERRA CLUB BULLETIN, VOL. XXIII.

PLATE XXXVI.



BOWMAN LAKE, GLACIER NATIONAL PARK

By Charles S. Webber



IN THE SELKIRKS—MOUNT SIR DONALD

By Charles S. Weibler

IN THE SELKIRKS—MOUNT SIR DONALD  
By Charles S. Webster

SIEPPA CLUB BULLETIN, VOL. XXIII.

PLATE XXXVIII



IN THE SELKIRKS—THE HERMIT GROUP  
By Albert J. Adams

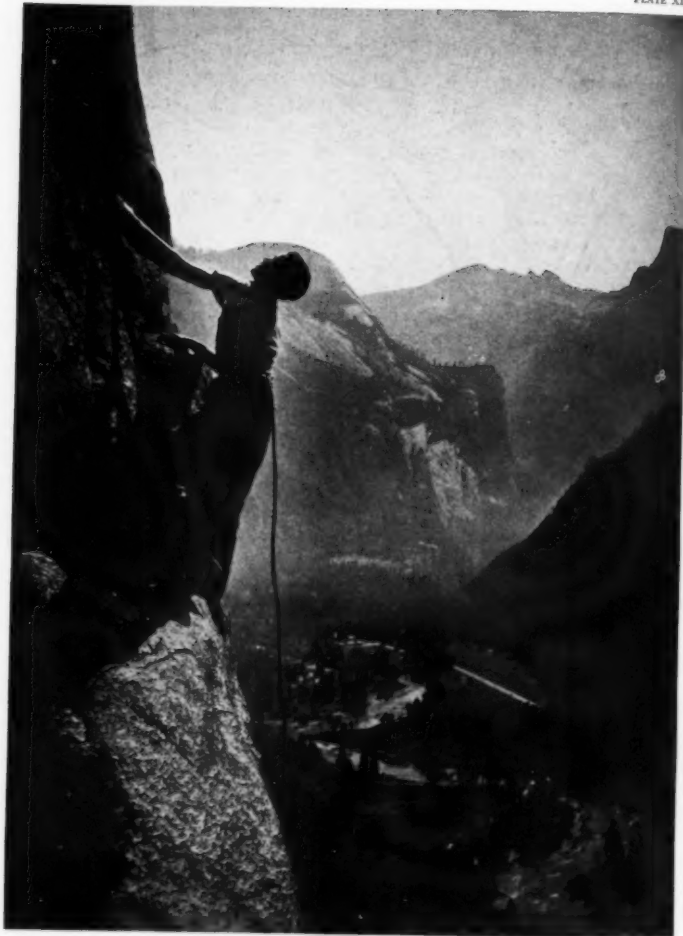


CLIMBING IN THE MOUNT WHITNEY REGION

By Howard Koster



ON THE BUTTRESS CLIMB, EAST FACE OF MOUNT WHITNEY  
By George Shochat



CLIMBING ON THE LOWER BROTHER

By David R. Brower

second class rock-climbing on peak called "impossible" by the Whitney Survey in 1865.

McKelvey's training consisted of several strenuous trail trips; this was his first taste of mountaineering. He showed no extraordinary fatigue upon reporting for work at seven o'clock next morning; his appetite, however, strained my imagination.

On September 9, 1936, I received the following letter from Owen L. Williams of Stockton: "Mr. Stuary McKerry [sic], on July twenty-second last, left a request in the Mount Lyell register to the effect that the next party up inform you that he had registered there. . . . I shall be interested to know whether or not he completed his climb in the allotted time." A copy of my detailed and laudatory reply, containing the statement, "It constitutes an endurance record unparalleled in the Sierra," was sent to McKelvey. The correspondence was returned with this note neatly printed on the envelope: "Thank you very much. What you say must be lived up to, must also, for modesty, be lived very quietly down."

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#### TAHQUITZ ROCK

BY JAMES N. SMITH

With the comparatively recent interest in highly technical rock-climbing, and the resulting conquest of Sierran spires and faces, has come the increasing importance of local climbing, not only as training for major mountaineering, but as a sport in itself. Rock-climbing is a sport that may be enjoyed—once one has learned a few tricks and methods—whether the rock is the East Face of Mount Whitney, or is in the backyard behind the incinerator. While all true Sierra Club members would prefer an environment of whispering pines, sparkling waterfalls and granite peaks, still most of us would rather explore nearby hills than stay at home dreaming of the High Sierra. Not long ago the Southern California Rock Climbing Section's scouting committee "discovered" Tahquitz Rock, in the San Jacinto Mountains. An interesting three-hour drive from Los Angeles brings one to Idyllwild, which, with its store, camp-ground, and swimming pool, makes an ideal center for climbing parties. The road then weaves around and over boulders, through beautiful Fern Valley, to the start of the Mount San Jacinto trail. The base of the rock is less than an hour's hike above this trail.

In appearance, Tahquitz Rock is generally egg-shaped, with granite cliffs four to seven hundred feet high, which give way on the east to a sharp ridge of nearby Tahquitz Peak. The summit of the rock (7973) may be reached from that side by an easy rock climb; all routes on the faces are considered major climbs. Indian legend tells us that this rock blocks the doorway of the deep cave in which Tahquitz (Devil) dwells, and that to this place, in the misty past, were borne beautiful Indian maids for Tahquitz. Since the white man has disrespectfully ignored this custom, Tahquitz vents his displeasure in curious rumblings of the mountain during certain

of the summer months. Recent rumblings heard by rock-climbers have been especially frightening, but investigation has disclosed that these were made not by Tahquitz but by blasting on the Colorado River Aqueduct under the mountain.

Of the six face-routes completed at present, "Fingertip Traverse" has become best known, due principally to the unusual nature of the pitch after which the climb is named. The first ascent was made September 19, 1936, by Jim Smith, Bob Brinton, Art Johnson and Bill Rice. Nine parties have since ascended this fifth class climb. Starting from the upper branches of a tree on the W. side, the route leads on friction holds up a steep face to another tree. It then follows several easy connecting ledges to a steep lay-back crack, six feet above which is a piton for safety. Ten feet beyond is a small ledge where the climber gladly anchors himself to a second piton. A delicate traverse is then made left to a narrowing inclined ledge which leads up to a safety piton at the beginning of the Fingertip Traverse. This pitch may be described as a ledge, too steep for friction, sloping off over an exposed face. The problem is solved by inserting fingertips in a small continuous crack at the junction of the ledge and the headwall, and working sidewise in this fashion for 25 feet, meanwhile using feet, knees, or other portions of the body for further support. With this behind, the climber hurries on up a face to a ledge large enough for any position of relaxation. The remainder of the route is much easier and consists of a series of steps and a small inclined trough, beyond which a friction traverse ends the climb at the cairn.

Other routes upon the faces vary considerably in difficulty. "The Trough" (first ascent August 22, 1936, by Jim Smith, Bob Brinton, Zene Gezitus) offers a wide variety of problems to the novice leader. "The Piton Pooper" (September 20, 1936, by Art Johnson, Bob Brinton, Bill Rice, Jim Smith), full fifth class, is a fine climb which goes over three overhangs and uses seven pitons in the 80-foot initial lead. "Angels' Fright" (September 20, 1936, by Bill Rice, Jim Smith), fifth class, is a small, steep trough which leads with direct aid over an awkward overhang and connects with the Fingertip Traverse. "Booksellers' Route" (October 3, 1937, by Dick Jones, Glen Dawson), a terrific fifth class climb, involving the use of 15 pitons. "White Maidens' Walkaway" (August 14, 1937, by Jim Smith, Art Johnson), longest and one of the finest climbs. A complete climbers' guide for Tahquitz Rock has been written, with the hope that climbers visiting in the South will wish to test their ability on our pride and joy. The climbing season starts early and lasts well into autumn. Southern California RCS members will be happy to assist visitors in any way possible.

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#### FIRST ASCENT OF EAST TEMPLE

BY GLEN DAWSON

A bright spot of fire shone from the summit of the East Temple at six o'clock on the evening of October 26, 1937, indicating that another of Zion

National Park's "Sky Islands" had been climbed. Although there was some evidence that Park officials were not very well pleased at having the peak "desecrated" by climbers, nevertheless, Joe Momyer was delighted, for he knew that his companions, Dick Jones, Homer Fuller, Wayland Gilbert, and I had safely reached the highest point. It is understandable that the Park officials were not very enthusiastic about our trip, for few organized climbing parties have visited Zion, and both ascents of its most famous peak, the Great White Throne, have been connected with serious accidents. W. H. W. Evans, who made the first ascent of that summit, in 1927, was injured on the descent. Ronald Orcutt, also a solo climber, made the climb in 1931, but shortly afterwards fell to his death on a nearby peak. Our Sierra Club party, however, had made the third ascent of the exceedingly difficult sandstone walls of the Great White Throne without undue risks, and was looking for another peak to conquer. In answer to Gilbert's naive question, "I suppose hundreds of people have been up the East Temple?" Superintendent Patrow told us that it was unclimbed.

In common with other summits of Zion the East Temple was originally part of a plateau, but now has been detached by the downward cutting of the Virgin River and its tributaries. It rises in a great white cliff 3000 feet above the river; the summit, elevation 7110 feet, is a red mesa standing above a forested terrace. We drove along the Mount Carmel Highway Tunnel, looking out of each window across the canyon to admire the sheer walls up which our route was to lead. At the upper end of the tunnel we left our car and went up the canyon, which makes a right-angle turn toward the east base of the East Temple. The canyon walls narrowed progressively until we could barely squeeze through. At the turn a series of difficult chimneys nearly defeated us. (An easier way is to go up the slabs from near the end of the Arch Trail.) The first objective was the lowest point between East Temple and Point 6205, shown on the excellent topographic map. From this pass one can see several large trees in the lower part of a steep amphitheater formed by a huge red overhang. Our route was diagonally to the right, then directly up to the trees. While Joe Momyer, sitting on the opposite walls with field glasses, helped us determine the best route on the huge face, Dick Jones and I led two ninety-foot ropes of two men each. A steep pitch to the left of the huge overhang brought us to the base of the left of two prominent cracks seen from below. Near the top of this crack we went diagonally left to the forested terrace, where we almost congratulated ourselves too soon; our difficulties were not over. To reach the final flat top we selected a cove in a red layer on the south side—about 150 feet high at that point—the upper few feet a hard resistant stratum forming a holdless overhang. Not until we used a three-man stand were we able to unrope on the pleasant forested summit area. The 1100 feet of elevation had taken five and one-half hours of unhurried climbing, much of it exceedingly difficult.

The sun was just setting over the West Temple as we selected a camping spot under one of the large piñon trees. So much dead wood was strewn

about that there was no need to cut firewood. In the early evening we built a signal fire on a point overlooking the lights of the Park headquarters and the village of Springdale. Near the fire we left a small cairn and a tin can with our names. Back on top Fuller doled out three dates, six figs and a few thimblefuls of water for supper. Between two blazing fires we talked and slept.

In the morning we walked around the rim watching the sunrise bring color to the maze of canyons and walls. We noticed a possibility of another route on the north, but, from above, it looked very sheer; so we roped down the way we had come, using 200 feet of 5/16-inch rope, doubled. Joe Momyer was waiting for us at the base of the climb with water and a marvelous breakfast. Although we had started off the previous morning just to explore the approaches, we had stayed out thirty hours.

Navaho sandstone is reputed very treacherous, yet it is massive and the stratifications provide numerous ledges one to four inches wide, which enable a good balance-climber to proceed over seemingly smooth cliffs. The rock is so soft that dislodged fragments usually break into sand before going more than a few hundred feet. A pointed-end piton-hammer will cut holds, but such procedure cannot be recommended; it is entirely unnecessary on the Great White Throne, violates Park regulations, and tends to destroy good climbing. Pitons are of a limited value, due to scarcity of suitable cracks. I carried several pieces of sling rope and occasionally could protect myself by tying a piece around a bush or tree, clipping in a carabiner. Thin-soled crêpe tennis-shoes were found the best footgear. A small whiskbroom to brush sand from tiny holds would have been useful had we had one with us.

October was found to be an ideal season for climbing—not too warm, brilliant autumn color, and few tourists. It is also the best month for exploring the Narrows and its tributaries—a trip to delight the heart of any rock climber or adventurer willing to wade a few miles in cold water. Park rangers should be consulted before climbs are made, as they often have helpful information. A record of new climbs is being kept, and they should be reported in detail. New and unusual ascents still abound, and to anyone familiar with Yosemite or Tahquitz climbing we can recommend Zion National Park for an ideal vacation.

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#### SHIP ROCK

BY GLEN DAWSON

Those who like peaks to remain unclimbed can rejoice in the majestic form of Ship Rock, elevation 7178 feet, in the northwestern corner of New Mexico. It rises 1600 feet from a flat, barren plain, unbelievably steep. No one has even reached the base of the summit pinnacle. In *Trail and*

Bibliography.—*Appalachia*, December 1931, 18:4, pp. 471-472. "Alpine Accidents in 1931," by Kenneth A. Henderson. *S. C. B.*, 1934, 19:3 pp. 38-41. "An Ascent of West Temple," by C. C. Presnall, Chief Naturalist, Zion National Park. *Zion and Bryce Nature Notes*, December 1936. A full description of The Narrows, by C. C. Presnall.

*Timberline*, December, 1937, there is recounted an attempt by a strong climbing-party, and in *Appalachia*, June, 1936, there is a good description of the Rock.

Forced to give up a week-end skiing trip because of lack of snow, Bob Brinton, Bill Rice, and I decided to look at Ship Rock. January 7 we drove almost to its base, 800 miles from Los Angeles, and shivered in light sleeping-bags on the frozen ground. Our route, the first gully south of that described in *Trail and Timberline*, probably leads to a cul-de-sac. Cold and difficult climbing prevented us from reaching our first objective, a col between the third highest point and a black arête on the west. The only possibility is on the west side. Pitons are needed in the upper part, but piton cracks are very scarce.

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#### TWO ROUTES ON EL CAPITAN

BY OWEN L. WILLIAMS

Two interesting routes are available for a fairly direct ascent of El Capitan from the floor of Yosemite Valley. The easier of the two follows the main west couloir, which is entered not far from the base of Ribbon Fall. The first recorded ascent of this route was June 5, 1905, when J. C. Staats continued his climb to the rim to obtain help after his companion had fallen 400 feet to his death from a point about halfway up. Although William Kat or Charles Michael may have made the climb during their ascents of practically everything in the Valley that does not require pitons, no other ascents are known until that of Ethel Mae Hill and Owen Williams, October 17, 1936. The route involves 3000 feet of rock scrambling followed by 500 feet of roped climbing in the steep upper reaches of the couloir.

The second route, more direct and more difficult, ascends the deep couloir, or chimney, which runs diagonally upwards along the west wall of El Capitan. It is most easily approached by going directly to the base of El Capitan at its most southerly projection, then proceeding northwestward along the base of the cliff to the bottom of the chimney, about 1000 feet above the Valley floor. The first serious attempt on this route was that of Ethel Mae Hill and Owen Williams, made December 12, 1936. At that time about 25 pitons were used, but many of these were wasted on false routes.

October 9, 1937, the chimney was successfully climbed by a party consisting of Ethel Mae Hill, Gordon Patten, Owen Williams. A late start necessitated a chilly bivouac on a ledge, the party being secured to a piton for safety. Eighteen pitons were used on this climb, a third of these for direct aid. A glance at the *Yosemite Valley* topographic map indicates the general character of the chimney better than description. It ends in a notch from which it is necessary to rope down into the couloir. From that point, the two routes coincide.

The chimney involves 1500 feet of rope and piton climbing to the notch; if the climb is continued to the summit of El Capitan, the additional 500 feet of rope work in the couloir must be accomplished. On the occasion of the first ascent the party crossed over the notch, then returned to the Valley floor by way of the easy lower section of the couloir. Ascent of the chimney involves no unusual technique. Many of the steep pitches can be climbed by the usual method of "chimneying." Elsewhere it is necessary to use ledges and cracks of varying difficulty. Presence of many chockstones is the source of greatest difficulty, being responsible for about seven overhangs. While exposure is relatively mild, pitons are definitely advisable.

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#### ROCK CLIMBING IN YOSEMITE

BY RICHARD M. LEONARD

The Rock Climbing Section of the San Francisco Bay Chapter has been active now for over five years. During that period it has scheduled eleven trips to Yosemite. These trips have steadily increased in popularity, culminating in an attendance of 160 for the four trips scheduled during 1937. Nevertheless, we are not yet ready to publish a climbers' guide to Yosemite, for there is still much exploration to do. Let no one be troubled by "crowds" on the floor of the Valley, or presume that he is intimately acquainted with all there is of beauty in Yosemite.

*Some Easy Trips.*—Rock climbers wandering off the beaten paths find many spots of unusual beauty that are easily reached. One of the most delicately beautiful sights I have ever known is the view of El Capitan Fall from its base as it is outlined against a deep blue sky and floats like a silver ribbon wherever the breeze may carry it. Drifting down the tremendous overhang of 1200 feet, "like gentle rain from heaven," it bathes a quarter-mile of sand and talus. Soft carpets of grass and gardens of flowers are here instead of the awesome destruction found at the base of the powerful Yosemite Fall. The climb to reach these gardens, with the immensely impressive view of the face of El Capitan, is an easy scramble up talus slopes to a point just under the famous pine tree on the face.

Another trip of unusual interest takes the climber up to view the tremendous power of the Upper Yosemite Fall from the base of the Lost Arrow. The climbing is not difficult, but does require a rope. It is mostly second class with short third class pitches. Route-finding is rather intricate. The viewpoint has extraordinary advantages. The heated gully, up which the trail goes on the opposite side of the fall, acts as a natural chimney drawing a constant breeze up it. This causes spray to drift towards those on the trail, but away from those fortunate enough to be viewing the fall from the E. The effect is to remove the veils and reveal the fall in all its beauty. The rockets, particularly, stand out. They may be followed in their plunge for over a thousand feet. Due to the position of the observer, nearly one-third the way up the fall, the usual crashing roar is to a great extent absent, and one hears a new sound, the strange

hiss of the rockets plunging through the air. As one goes down from that lofty viewpoint and wanders over the spray-drenched shelves near the Middle Cascade, one finds terraced gardens of exquisitely delicate design. They are truly hanging gardens, on slopes of naked granite at angles of ten to thirty degrees. The vertical parapet on the lower side of each garden is of green moss. Into the basin thus formed, the constant spray has washed sand to form a level terrace covered with sky-blue lupine, golden monkey-flowers, scarlet paint brush, and many other beautiful flowers.

*New Book-Type Registers.*—In consideration of the greatly increased interest in hiking and climbing in Yosemite, and in view of the desirability of having the Sierra Club and its purposes known to those who enjoy the out-of-doors, it was decided to place adequate book-type registers at several of the prominent viewpoints around the Valley. Accordingly, on May 30, 1937, such registers were placed on Clouds Rest, North Dome, Eagle Peak, and Starr King.

*Mount Clark.*—February 21, 1937, David R. Brower, Kenneth Adam, Kenneth Davis, Hervey Voge made the first known winter ascent. They used skis to within 1000 feet of the summit; ice-ax and rope from there on.

*Mount Starr King.*—March 9, 1937, having overcome the lack of handholds and footholds caused by slippery conditions of snow and ice, David R. Brower and Joe Specht made the first known winter ascent of this point which the Whitney Survey once reported as "absolutely inaccessible" even under the best of conditions. Their route was the easier route from the SE., as used by Anderson, Hutchings, and Lumbert on the second ascent, sixty years before.

*Ahuyiah Point.*—This summit derives its name from the Indian name for Mirror Lake, above which it rises as a spur from the Half Dome-Clouds Rest saddle. It has undoubtedly been climbed many times, but the first recorded ascent was September 3, 1933, by Richard G. Johnson, Jack Riegelhuth, Hervey Voge in a third class climb from the W. August 5, 1937, David R. Brower and Morgan Harris worked out an interesting new route up the gully to the E. Climbing was only of second class difficulty, but accurate route finding is essential.

*Washington Column.*—This seems to be established as the most popular fifth class climb in the Sierra. It has now been ascended twelve times, half of them this year. Its popularity is well deserved, but notwithstanding that three exceptionally competent feminine climbers have made the climb, one should not fall into the error of considering it "an easy day for a lady" and thereby lead the inexperienced into difficulty. It is still a fifth class climb, and requires commensurate training and experience. No variation in route has been made since the second ascent.

*Panorama Cliff.*—The second ascent of this fine fifth class climb, the longest in the Valley, was made May 29, 1937, by Ethel Mae Hill and Owen Williams.

*Royal Arches.*—Those who made the first ascent of this face considered it easier than Washington Column. Robert K. Brinton and William Rice,

who made the second ascent, June 9, 1937, considered it more difficult than the Lower Cathedral Spire. In any event, the climb appears very interesting, with careful route-finding a necessity.

*Higher Cathedral Spire.*—In the four ascents this year, the tendency seemed to be to develop efficiency and speed on the exact route of the first ascent, in order to reach the summit as quickly as possible, rather than to improve the original route through elimination of artificial aid, or to prospect and develop new and better variations. It would seem that the latter policy is the more valuable, not only for the general benefit, but also for the development of the individual climber himself. In the tentative classification which appeared in last year's *Bulletin*, (*S. C. B.*, 1937, 22:1, p. 49), the Cathedral Spires were conservatively listed as fifth class. Glen Dawson, who has had extensive experience in Europe, climbed the Higher Spire this year and believes that both spires belong in the sixth class. Those who made the ascents this year are: May 29, 1937, Glen Dawson, Richard Jones, William Rice; May 30, David R. Brower, Raffi Bedayan, Kenneth Davis, Hervey Voge; May 31, William Hewlett, Carl Jensen, Rolph Pundt; September 19, Raffi Bedayan, Torcom Bedayan, Hans Helmut Leschke.

*Lower Cathedral Spire.*—The route established on the first and second ascents was not varied in any way on the three ascents made this year. Those climbing were: May 28, 1937, William Hewlett, Carl Jensen, Rolf Pundt; June 6, Robert K. Brinton, William Rice; October 9, Torcom Bedayan, William Hewlett, Don M. Woods.

*El Capitan.*—The account of the fine climbs of the west couloir and chimney is chronicled elsewhere in these mountaineering notes.

*Lower Brother.*—July 15, 1937, Morgan Harris and David R. Brower completed a spectacular new route directly up the arête.

*Arrowhead.*—This sharp pinnacle situated on one of the arêtes of the Castle Cliffs is best viewed from the vicinity of Yosemite Lodge. A long-standing challenge was met September 5, 1937, when David R. Brower and Richard M. Leonard accomplished the first ascent and then roped off into Indian Canyon. The climb was unusually enjoyable, for the holds were so firm and plentiful that the very exposed character of the climbing did not detract from the enjoyment of the solution of the new problems encountered. It ranks as a very difficult fourth class climb with two fifth class pitches. November 13, 1937, after the Rock Climbing Section had enjoyed three days of skiing, David R. Brower repeated the climb, with Morgan Harris as leader, obtaining a fine 16-mm. motion picture in color. Telephoto shots by Leonard and Kenneth Davis, on the edge of a near-by cliff, and close-ups by Brower and Harris combined with a sequence on practice climbing in Berkeley, make a comprehensive exhibit of the technique and fun of the sport of rock climbing.

*Glacier Point.*—A serious attempt to scale the face of Glacier Point just E. of the famous Overhanging Rock was thwarted by holdless granite at a point nearly two-thirds of the way up. The attempt was made on June 24.

1937, by David R. Brower and Morgan Harris. They are not yet persuaded that it is impossible.

*Pulpit Rock.*—Attempts by two different parties of experts failed to solve the problem of the missing holds on this sharp pinnacle. It will definitely be attempted again, but with more than two on the ropes, in order to assure a higher factor of safety in belaying. The willingness with which our climbers have turned back on many a problem that turned out to be too difficult for them indicates a fundamentally sound policy which has done more than any other factor to preserve the safety of our climbing.

*Lost Arrow.*—This is at present probably the most fascinating unsolved problem in the state. Standing almost vertically 1200 feet above its base, its slender shaft is close to the horse trail and steel railing at Yosemite Point. The name "Lost Arrow," derived from Indian legend, has now been corrupted by facetious rock climbers to "Last Error." Hence, the isolated ledges at 350, 750, and 1050 feet from its base are appropriately known as the "First Error," "Second Error," and "Third Error," reserving the "Last Error" for the summit. May 29, 1937, David R. Brower and Richard M. Leonard made the "First Error." To do so required thirty pitons for safety and about five for direct aid, although the direct aid was utilized for conservation of strength and to raise the factor of safety rather than through physical impossibility of climbing the pitch otherwise. The climbing was fifth class but would increase to sixth class from there on. We feel that the route to the "Third Error" from below is perfectly possible, but would require experts capable of ascending a very long chimney at a very high angle. One cannot now say whether it is possible to make the "Last Error," for as Sir Leslie Stephen has pointed out, one must "rub his nose" against the peak in order to ascertain whether the minute cracks and holds are actually there or not. In the case of the Lower Cathedral Spire no photograph taken either before or after the first ascent shows any possible way of climbing the face on which the "Flake" is hidden. The solution of difficult problems is one of the major factors in the sport of rock climbing. So long as we stay clearly within the limits of our abilities, we can enjoy repeated attempts on even such problems as this with pleasure and adequate safety.

## BOOK REVIEWS

**JOHN OF THE MOUNTAINS**<sup>1</sup> Many times, in the course of his work on *Travels in Alaska*, the last book that he himself prepared for publication, I have seen Mr. Muir score out all of the day's careful emendations and return to the simpler wording of his original notes. "There's a freshness about one's first impressions," he would say; and it is that freshness, that clear, bright enthusiasm, which makes up the special charm of this book, publication of which is the most significant of the many celebrations of the hundredth anniversary of his birth.

These unpublished journals are of particular interest to Sierra Club members in that they reveal more fully than in any of his formal publications the scope of John Muir's early Sierra wanderings. Furthermore, in the absence of identifying names at that period, they furnish much material for speculation, for a sort of mountaineering sleuthing that ought to be of great interest to our more vigorous and enterprising members, many of whom perhaps, even with all the current facilities of trails and maps, might still quail before the prospect of a fourteen-day solitary "saunter" across summit divides on a diet of bread and tea. "Some people," the journal says, "miss flesh as a drunkard misses his dram. This depraved appetite stands greatly in the way of free days on the mountains, for meat . . . makes a repulsive mess when jammed in a pack . . . So also the butter-and-milk habit . . . bread without butter or coffee without milk is an awful calamity, as if everything before being put in our mouth must first be held under a cow." Then, turning the page, one reads, "When we dwell with mountains, see them face to face every day, they seem as creatures with a sort of life—friends subject to moods, now talkative, now taciturn, with whom we converse as man to man. They wear many spiritual robes, at times an aureole, something like the glory the old painters put around the heads of saints." Perhaps even more vividly than in his other books this volume paints John Muir's delight in his "sweet, cumberless roving," reveals the depths of the nature that refused to be "twisted into the characterless cable of society."

Too high praise cannot be given to Linnie Marsh Wolfe's editing, too high admiration expressed for her painstaking and difficult work on the mass of material never, for all Dr. Badé's infinitely longer and equally conscientious work on it, quite reduced to order; material that baffled even Mr. Muir himself when he attempted to arrange the notebooks "in something like lateral, medial and terminal moraines" on his den floor. We of the Sierra Club, in particular, are deeply indebted to Mrs. Wolfe for having gathered together, out of the stained and travelworn and scattered

<sup>1</sup>*John of the Mountains*. The Unpublished Journals of John Muir. Edited by LINNIE MARSH WOLFE. Houghton Mifflin Company, Boston. 1938. xxii+459 pages, illustrations. Price, \$3.75.

pages of the old journals, a record of such outstanding charm and significance.

MARION RANDALL PARSONS

THE HILDEBRANDS' This valuable little book, containing 87 pages of scientific caloric research, tested camp-cooking receipts, and side-splitting cartoons, is divided into three parts. Part I, written by Joel Hildebrand, scientist by profession, and President of the Sierra Club by popular vote, is entitled, "The Light Pack versus The Heavy Appetite." This section is substantially a reprint of an article which appeared in the *Sierra Club Bulletin* in 1933, (18:1). By closely following Professor Hildebrand's table of food requirements, which are figured on the pounds per man per day basis, even the most inexperienced camper could plan food for any number of persons and feel assured that his dish-washing days were over, because it is a pretty general rule that the cook never washes dishes on a camping trip.

Part II, written by Louise Hildebrand, Joel's daughter, is entitled, "Cooking versus The Heavy Appetite." One doesn't usually get so engrossed in reading a cook-book that one doesn't care to answer the telephone when it rings, but that's the way it is. You can't put it down until you have read it through. Each page is rich in humor, as well as in butter, eggs, cream soups, goulashes, reflector-oven baked cakes and biscuits, and many other excellent receipts for camp-cookery. It is interspersed with hints and suggestions on fire making and how best to flip a flap-jack, all told in such an amusing style that you'll probably forget to stir the cream soup while you finish the rest of the book.

Part III was compiled by Louise Hildebrand from receipts and general information given her by Ash Hill, John Carl, and many others, and is entitled, "Suggestions for Hunters and Fishermen." Your reviewer is neither hunter nor fisherman and knows next to nothing about the preparation or cooking of fish or game, but having done a great deal of camp-cooking and knowing the excellence of the suggested menus and means of preparation in the foregoing Part II, she would, without hesitation, shoulder a gun or rod and set off with her little Hildebrand cook book.

At the end of the three parts the Hildebrands have worked out a very comprehensive "Food List for Ten Persons for Two Weeks (140 Man-Days)." It is excellent; but it must be remembered that the list as it stands is for a pack animal trip. However, it gives one a splendid basis from which to work, no matter what type of trip is being planned.

This book is not only an aid to camp cookery, but should be carried along to be read aloud at campfire. It will bring many laughs. Here and there throughout the book Milton Hildebrand, one of Joel's sons, has drawn, in just a few simple lines, cartoons illustrating some of the heart-rending pre-

<sup>2</sup> *Camp Catering, or how to rustle grub for hikers, campers, mountaineers, packers, canoers, hunters and fishermen.* By LOUISE HILDEBRAND and JOEL H. HILDEBRAND. With drawings by Milton Hildebrand. Stephen Daye Press, Brattleboro, Vermont. 1933. 87 pages. Price, \$1.25.

dicaments in which beginners as well as seasoned campers find themselves. One drawing, in particular, caught my fancy. It shows a camper with his hands dripping goeey dough, helpless against the vicious attack of a mosquito gayly buzzing around his ears.

Miss Hildebrand's style is amusingly refreshing throughout, and I enjoy a silent laugh when I think of her dissertation on the value of a single orange on the top of a mountain "after you've climbed in the sun till you feel like a toasted soda cracker."

DORIS LEONARD

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**FUR-BEARING MAMMALS**<sup>3</sup> Fur-bearing mammals, while not as numerous as they once were, are still an important factor in the economic life of

California as well as a source of never-ending interest to those who visit the wilder sections of the State or live in adjacent regions. The authors of this extraordinarily comprehensive work have kept in mind both the economic aspect and the general interest of their subject. There is a concise history of fur trapping in California, a statistical chapter on present-day trapping, and a discussion of population trends in fur-bearers, prefatory to the main contents of the two volumes which take up each animal in turn. The larger animals naturally attract attention at first: the bears, the mountain lion, the wolverine, the coyotes, the fur seals. But it is in the biographies of the lesser folk that the general reader is likely to find new and fascinating acquaintances—weasels, mink, pine martens, kit foxes, and beavers, for instance. The reader is not likely to stop at a mere book-acquaintance, however, for the authors impart their burning enthusiasm for wild life. These animals flourish in neighborhoods much closer than is often suspected. The grizzly bear is the only one that has irrevocably vanished from the scene—Dr. Grinnell has given us a memoir of him in this number of the *Sierra Club Bulletin*. The sea otter was supposed to have departed from California, but since the publication of this work he has been found back again in his old haunts and there is hope of repopulation.

The two volumes are beautifully printed, with illustrations in color and in black and white of uncommon excellence.

FRANCIS P. FARQUHAR

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**ON THE ADMIRATION OF MOUNTAINS**<sup>4</sup> Conrad Gesner was one of those great figures of the Sixteenth Century who brought about the Renaissance by throwing off superstition and the cloak of ignorance. He taught philosophy at the University of Zurich, was the greatest botanist of his time, and compiled a catalogue of all known books, ancient

<sup>3</sup> *Fur-bearing Mammals of California*. Their natural history, systematic status, and relations to man. By JOSEPH GRINNELL, JOSEPH S. DIXON, and JEAN M. LINDSAY. 2 volumes. University of California Press, Berkeley. 1937. xii+xiv+777 pages. Price, \$15.

<sup>4</sup> *Conrad Gesner: On the Admiration of Mountains, and A Description of the Riven Mountain*. Translated by H. D. B. Soule. Together with: *On Conrad Gesner and The Mountaineering of Theserdank*, by J. Monroe Thorington. Bibliographical notes by W. Dock and J. Monroe Thorington. The Grabhorn Press, San Francisco, 1937. 55 pages; woodcuts. Price, \$5.

and modern. But, for us, he has a special distinction—he anticipated the modern spirit of appreciation of mountains and mountain-climbing. In 1555, when other men regarded mountains with complete indifference, if not with profound dislike or even terror, he looked upon them with joy. Two passages from his letters are quoted in this number of the *Bulletin*, on pages 55 and 64. The quotations are taken from a translation from the Latin made by Douglas Soulé, recently published in a beautiful edition by the Grubhorn Press. Included in the volume is a series of reproductions of old woodcuts showing the progress of Theuerdank through the Alps, and two essays by Dr. Thorington, editor of the *American Alpine Journal*, one on Gesner, the other on Theuerdank. It is a rare opportunity for the mountain-lover to obtain such rich material for his library in such an attractive form.

FRANCIS P. FARQUHAR

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**PLACE NAME VIGNETTES OF THE COAST COUNTIES<sup>5</sup>** Completing a series of three volumes of vignettes on well and little known places in California, the present volume concerns regions of greatest interest to those familiar with the Bay Region and adjoining coastal counties from San Luis Obispo to the Oregon line. For reference work, to which this historical series is admirably suited, the bibliography and 31-page index will be most helpful. Those who read merely for pleasure need not be apprehensive of this recommendation. The volume is entertaining throughout, as it follows the romance of California place names from the time of the explorers through Rancho and Gold Rush days on down to the present. California's history may be brief, but it is fascinating; and so comprehensive an historical work is a timely aid in cementing concretely our evanescent link with the past.

DAVID R. BROWER

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**SUCCESS IN THE HIMALAYA<sup>6</sup>** The ascent of Nanda Devi was an achievement of special significance in mountaineering history, for it demonstrated the possibility of success in Himalayan climbing without an elaborate system of supply and support. A small group of well-qualified climbers, half from Great Britain, half from the United States, without formal organization, but with a very clear idea of what they wanted to do, had a splendid time on one of the world's greatest mountains and put two of their number on top. Tilman's narrative is in keeping with the uniformly fine character of the whole expedition.

<sup>5</sup> *Historic Spots in California. Counties of the Coast Range.* By MILFORD BROOKE HOOVER, with an introduction by Robert Glass Cleland. Stanford University Press, 1937. xxiii+718 pages. Price, \$4.

<sup>6</sup> *The Ascent of Nanda Devi.* By H. W. TILMAN, with a foreword by Dr. T. G. Longstaff. The Macmillan Company, New York. 1937. xiii+235 pages; illustrations, maps. Price, \$3.50.

**THE ALBUM OF A MOUNTAINEER**<sup>7</sup> Here is a subject for spirited discussion. Frank Smythe is unquestionably one of the greatest mountaineers of the present day. He is also one of the ablest writers about mountains and mountain-climbing. His photography is good, but not nearly as good as his climbing and writing. We are glad to have his album of views, but we are not very enthusiastic over his comments on the art of photography.

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**AT THE SOURCES OF THE NILE**<sup>8</sup> Tilman tells of the vast Ruwenzori, whose snow-fields and glaciers feed the Nile, and of his trip across equatorial Africa.

<sup>7</sup> *The Mountain Scene*. By F. S. SMYTHE. Adam and Charles Black, London. 1937. ix+153 pages, 78 reproductions of photographs by the author. Price, 12s, 6d.

<sup>8</sup> *Snow on the Equator*. By H. W. TILMAN. The Macmillan Company, New York. 1938. xi+265 pages; illustrations. Price, \$3.

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#### OTHER BOOKS AND ARTICLES OF SPECIAL INTEREST

*From the Sierra to the Sea*. Eleven original brush drawings of California subjects by Chiura Obata, each accompanied by a translation from the artist's poetry. The Archetype Press, Berkeley. 1937. Price, \$25.

*Mesonio Geology of the Ritter Region, Sierra Nevada, California*. By HOMER D. ERWIN. Reprinted from *The Journal of Geology*, Vol. 45, No. 4, May-June 1937, pages 391-413; illustrations.

*The Human Side of Snow. The Saga of Mount Rose Observatory*. By DR. J. E. CHURCH. Reprinted from *The Scientific Monthly*, Vol. 44, February 1937, pages 137-149.

*The Classification, Nomenclature and Definitions of the Forms of Ice and Snow According to Seligman*. By ROBERT G. STONE. Reprinted, with corrections and additions, from *Bulletin of the American Meteorological Society*, January 1937, pages 5-10, and February 1937, pages 47-53.

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